



Culture of Consciousness

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The Journal of Modern Psychedelic Culture

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Talking Politics

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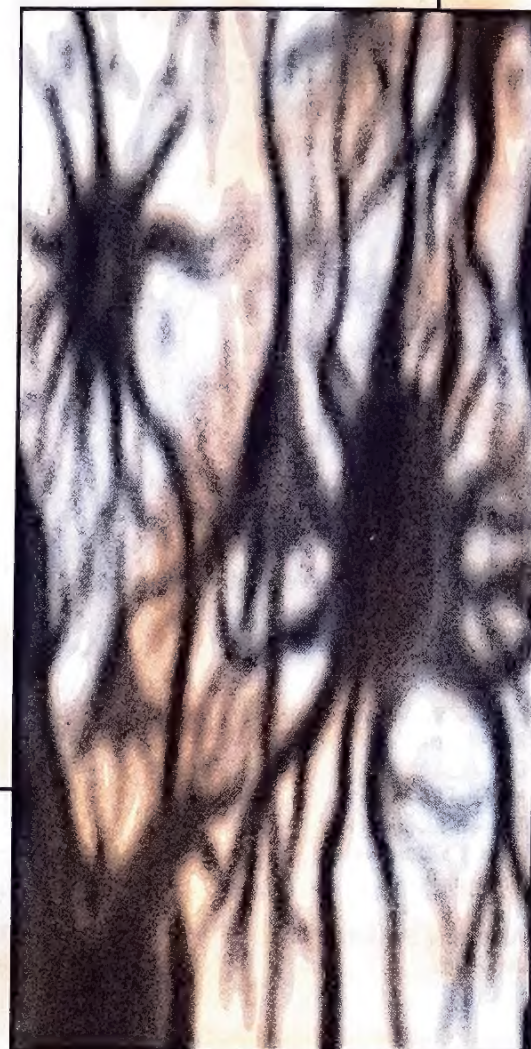
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the journal of modern psychedelic culture



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Editorial

from the renegade files of Scotto

I remember the day I met Special Agent James Kent, Director of *The Resonance Project*, as clearly as I remember the day I took my first bath in liquid LSD. The experiences were remarkably similar, both leaving me emotionally and psychically exhausted, with strange bruises all over my body, and an unexplainable bleeding from directly behind my ears. In both cases I had been searching for something incredible, something to lift my mundane, pathetic life out of its existential gutter and give it meaning - or if not meaning, then at least better visuals. I had only a pile of old *Psychedelic Illuminations* magazines, and pristine copies of the first few issues of TRP, to guide me in my quest. Somewhere, within the city of Seattle, the man James Kent and his insane band of rogue psychedelicists, the staff of TRP, were assembling new issues, and so, on a fateful day some many months ago, I set out to offer my humble services to their noble enterprise.

"Scotto, please," my close friend Crank Boy pleaded with me, as I explained the day's business to him, "spending even minutes in James Kent's presence will undoubtedly drive you to the very brink of madness, if not beyond!" He munched nervously on a Chex mix of colored tablets and pills, his hands twitching as he continued. "Perhaps 'James Kent' is actually an underground conspiracy designed to ensnare the unwary. Perhaps the identity of 'Kent' is actually one tendril of a writhing cthonic beast that devours all who draw near!"

"Crank Boy," said I with an arrogant smirk, "you need to lay off the cough syrup."

Hours later, I found myself in the reception area at TRP's Seattle headquarters. The receptionist, a beautiful androgyne named Glamour Esque, pleasantly informed me that Mr. Kent would be with me in a few moments, and in the meantime, would I care for a refreshing mint? Mistake #1: at TRP, "refreshing mint" is code for "devastating psychic time bomb," and within minutes I was flat on my back, writhing in some strange combination of agony and ecstasy. Glamour Esque took notes in a small book, and within minutes my reaction had been incorporated into a vast database of information, cross-referenced and annotated as appropriate.

"Ah, yes," a compelling voice in the doorway said, "I see you've already encountered the latest advances in placebo technology. Good, good. Now get up off the floor - that slime down there is precious, and I can't have you walking out of here with it all over your clothes."

It was Kent all right. As a blistering barrage of multi-colored swirls and fractal insanity filled the air, I could still make out his impressive visage in the doorway of his office: tall, menacing despite his quaint green cardigan sweater, a ferocious look of wild glee in his eyes behind those schoolmarm specs. I struggled to follow him into his office, a dark wreck of a room, with arcane reference materials and ancient tomes of eldritch wisdom scattered recklessly about the place. Several glowing computer screens offered windows into the seamy underside of the Internet. A battered grand piano sat next to the desk, and there were beady little eyes staring at me from inside the antique instrument.

THE REALLY IMPORTANT INFORMATION

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Mistake #1: at TRP, "refreshing mint" is code for "devastating psychic time bomb."

"Elves," Kent muttered. "I've tried everything to get rid of them, but they keep finding their way back into this dimension. Now then, Mr... Scotto... what can I do for you?"

"Well-" I began, stammering with fear.

"ENOUGH!" Kent shouted, sweeping the contents of his desk off onto the floor with a majestic swoop of his overly long arm. "Maybe you don't understand what's at stake, Mr. Scotto, so let me be plain. It's the year 2000, and it's no longer possible to 'turn on, tune in, and drop out.' Even if you wanted to drop out, they've got hundreds of ways to track you and all your personal information. The kids these days have no idea how much their civil liberties are being eroded, and most of them can't be bothered to pay attention. They're too busy sucking down corporate-sponsored pabulum from the mass media, and pretending that popping a tablet of street MDMA is some kind of rebellion. ARE YOU FOLLOWING ME?"

I didn't dare shake my head no.

He sat down heavily at his desk and continued, his eyes glowing red. "You have to fight for change on all fronts: scientific, political, cultural, and spiritual. We need intelligent voices, creative voices, passionate voices, to advance the state of the movement. There are thousands upon thousands of sympathetic listeners in this world, I'm sure of it, but we've lived so long with the specter of risk and punishment that we have yet to fully catalyze that network. There is much work left to be done. The question is: Is you in, baby, or is you isn't?"

I joined the staff that day and never looked back.

With this issue, TRP is proud to welcome Earth Erowid and Fire Erowid, creators of the Vaults of Erowid (<http://www.erowid.org>), to our staff as contributing editors. In this issue, Fire contributes an excellent article, "70 Common Drug Myths," that is not to be missed.

You may have also noticed our new tagline for TRP: "The Journal of Modern Psychedelic Culture." There is indeed an intelligent network that is working on all fronts to reform the image of the psychedelic movement and advance the state of the art in psychedelic research. Although we may come from enormously disparate backgrounds, we share a common belief that on a very meaningful level, entheogens have significant potential to improve our lives and our society. Publications such as the *MAPS Bulletin*, the *Heffter Review*, and the *Entheogen Review* are disseminating exciting information to a community of researchers and informed laypersons.

With TRP, we're contributing an additional voice, an alternative voice with an eye on many aspects of the culture that we share in common. By understanding not just the specific effects of the substances themselves, but also the larger context in which so many of these experiences take place for so many people, we believe we can affect change.

Every day, we believe there are probably many who have found on their own some reason to question what they believe about the War on Drugs in America - maybe you even know someone in that position. Hopefully TRP can act as a window into modern psychedelic culture in a way that illuminates the many changes that have taken place in the movement since the '60s. We have not dropped out. We're doctors, scientists, engineers, programmers, industry professionals from all walks of life. We're musicians, dancers, writers, actors, voices of modern art. We cross spiritual traditions, intellectual disciplines, and generations, and we're increasingly more and more informed about the issues surrounding responsible use of psychedelic drugs. TRP is happy to be part of that change.

Last but by no means least, TRP is proud to announce the birth of Jay Cooper Kent on December 22nd, 1999. Jay is the son of TRP founders Kimberly Cooperrider and James Kent. Rest assured, friends, the brainwashing has already begun.

Let us know what you think, and when you're finished, pass this issue on and spread the word. It took a long time to get this issue to press, but here it is - **Issue #5 is alive in your hands.**

Sincerely,
Scotto

About the cover:

This issue's cover is an original digital artwork, *Lightcore O: Goddess Giving*, created exclusively for TRP by Axis of Seattle, Washington.

About the guts:

This issue of The Resonance Project was printed in two-color with soy-based PMS 2695CVC (purple body text) and PMS 1585CVC (orange background text) inks — odd choices we know, but we do love them so. The paper is 50# recycled white opaque book stock. Common fonts used include Emigré Triplex and Matrix families, and Adobe Futura and Gill Sans families (among others). All pages laid out in Adobe PageMaker 6.5. Original artwork created and/or digitized using Adobe Photoshop 5.5 and Adobe Illustrator 8 or Macromedia Freehand 8. The TRP pre-press operating system of choice is Macintosh, of course.



BREATH FRESHENER BUST

A federal grand jury in Fayetteville, Arkansas, indicted thirty-year-old James Longley on charges of distribution of LSD. Longley allegedly stored the drug in **small bottles labeled as breath freshener**. Police also found what they think is one-half ounce of marijuana and more than four thousand dollars in cash. No word yet on what happened to the missing breath freshener.

MAN CAUGHT WITH COCAINE IN CROTCH

In Astoria, Oregon, a suspected drug trafficker was arrested when the cocaine he had stashed down his pants was **burning his crotch** so much he had to ask police to remove it. Police pulled over the car Roberto Valiente-Martinez, 28, was riding in because the driver had parked inside a crosswalk. The driver was not licensed, and as police questioned him and the passengers, police say Valiente-Martinez got fidgety. After a few minutes, the man pleaded with Officer William Barnes to remove a bag of cocaine hidden down his pants. Valiente-Martinez was arrested and charged with drug dealing and possession. Police said he was also carrying heroin.

TRP knows full well we will go straight to Hell for making any additional comments about this story. Nevertheless... *dude, are you fucking crazy??*

NEW JERSEY WOMAN WIGS OUT

After a court hearing in which Hackensack, New Jersey resident Irma Acosta-Arya pleaded innocent to cocaine and heroin possession charges, sheriff's deputies allegedly found **21 bags of heroin and 22 bags of cocaine** concealed in the 39-year-old woman's wig and underwear. Acosta-Arya, of course, was lucky not to experience the infamous Valiente-Martinez burning crotch syndrome.

BRITAIN'S NATIONAL HEALTH SERVICE SUED OVER LSD PRESCRIPTIONS

Eighty-five Britons are suing the country's National Health Service (NHS) for prescribing them LSD in the early 1960s, claiming the side effects ruined their lives. Law firm Alexander Harris said the lawsuit — which could be worth **millions of pounds in damages** — could come to court as early as next year.

LSD was given to patients for a variety of complaints, generally related to perceived mental illness. The NHS stopped prescribing it for therapeutic use in the late 1960s. Some of the claimants said they had been brain damaged by taking LSD. Others had lost their jobs because of the after effects.

"It changed my whole life overnight," an anonymous 73-year-old was quoted as saying. "It feels as though the drug opened up my mind and it didn't close afterwards," he added, saying he often suffered flashbacks to his childhood. The man claims to have developed agoraphobia — an abnormal fear of open and public places — after he was prescribed the then unlicensed drug by an NHS psychiatrist between 1961 and 1964. He was given the drug after doctors failed to identify why he was suffering from stomach pains, telling him **it was probably all in his mind**.

The 73-year-old said he had been given "massive doses" of LSD and had not been able to use public transport or travel abroad since. "My whole mind is full of fear. I **live with a constant fear of the sky**," he added, saying he lost his job as a food company sales representative because of the after effects.

CONGO SMOKE OUT

In a feature on Patrick Matthews' new book *Cannabis Culture*, readers are treated to the delightful factoid that Congo's criminals are made to **smoke marijuana until they pass out** as part of their punishment.

SMOKING — HEY, GUESS WHAT, IT'S BAD FOR YOU!

Philip Morris Cos. Inc. has **admitted publicly that smoking cigarettes causes cancer**, is addictive, and creates tremendous health hazards. According to the Philip Morris web site (hold on to your seats, as this may be very difficult to believe at first): "There is an overwhelming medical and scientific consensus that cigarette smoking causes lung cancer, heart disease, emphysema and other serious diseases in smokers. Smokers are far more likely to develop serious diseases, like lung cancer, than non-smokers."

In addition to its tobacco operations, Philip Morris owns Miller Brewing Co. and Kraft Foods, which makes Jell-O, Maxwell House coffee and Oscar Mayer meats, begging the question: when, oh when, will the company finally confess that their bologna has a first name, and tell us what the damn name actually is? Spell it out already!

ECSTASY SMUGGLERS IN DISGUISE

Seven people were indicted on charges of smuggling ecstasy in a scheme that relied on Hasidic drug couriers to avoid detection. Smugglers in this ring used "**conservative Jewish youths**" in "distinctive religious garb" to avoid attracting attention from Customs. The seven individuals in question are accused of **smuggling over 1 million ecstasy pills** from the Netherlands into the United States.

TRP is of course appalled by this situation. It is obviously far past the time when we should be strip searching nuns and priests as well; those habits and robes could *easily* hide over a million ecstasy pills. *What is this nation coming to?*

DO YOU WATCH THE



send intel to: trp@resproject.com
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NAZI STIMULANT CIRCULATING AS PARTY DRUG

Two packages of a so-called "hallucinogenic stimulant" called "yaba" were intercepted at London's Heathrow airport, and similar seizures were made in France and Ireland. The amphetamine derivative was originally developed by Nazi chemists to keep troops awake, and the recipe is now on the Internet. Alarmist warnings were raised that yaba could "soon rival Ecstasy as the drug of choice in British dance clubs," and is described as being purer and stronger than other forms of amphetamine. Yaba producers are apparently operating out of the Golden Triangle region, where the borders of Thailand, Myanmar, and Laos meet.

THE OLD "LSD IN THE SOFT DRINK" ROUTINE

Jarod Maier, an 18-year-old high school student in Cincinnati, confessed to spiking his favorite teacher's soft drink with "a capsule of LSD" as a joke, and has agreed to a deal putting him in jail for a year. He pleaded guilty to one count of **attempting to corrupt another with drugs**, and could have received up to five years in jail; the original charge, corrupting another with drugs, could have carried a life sentence if the teacher had been seriously hurt. "I did not think that amount of LSD would have this much effect," the student said in a statement to police. The teacher, Timothy Hicks, "felt sick" soon after drinking the soda, but has not had lasting health problems — not counting, presumably, his realization that society is a sham and the educational system is just a machine for cranking out robot slaves to the Man.

SEVEN IN TEN U.S. DRUG USERS HOLD DOWN FULL-TIME JOBS

According to a recently released report from the U.S. Department of Health and Human Services, about 8 percent of full-time workers — or 6.3 million Americans — admitted in 1997 that they had **used illegal drugs in the preceding month**. "The typical drug user is not poor and unemployed," Barry McCaffrey, the White House drug policy director, said in a statement. "He or she can be a co-worker, a husband or wife, a parent." Indeed, in the same statement, McCaffrey expressed he was surprised to learn that the typical drug user does not have tentacles, eat babies, or molest nuns and social workers for fun. TRP cheerfully maintains, however, that McCaffrey simply doesn't know where to look.

AUSTRALIAN SHOOTING GALLERY OPENS

Australia's **first legal heroin shooting gallery** will open in Sydney next year as part of an effort to get addicts off the streets. A radical revamp of New South Wales' state drug laws also includes trials of a compulsory treatment program for small-time users of heroin, speed, LSD and Ecstasy. The Catholic order Sisters of Charity and St. Vincent's Hospital will run a medically supervised injecting room for 18 months in Kings Cross, Sydney's nightclub district. The head of St. Vincent's Hospital's alcohol and drug service, Alex Wodak, said the injecting room could expect 50,000 visits a year and prevent up to 40 overdose deaths. No word yet on whether the stringent application of rulers to addicts' knuckles will be part of the treatment.

CHICAGO STING SCORES SCHOOL BUS

In Chicago, a **man driving a school bus** was among 91 people arrested in a span of four hours recently as police conducted a reverse sting operation, pretending to sell drugs on the grounds of a South Side public housing project. The 44-year-old school bus driver had just finished dropping off all of the children on his route when he stopped the bus and attempted to buy crack. He was charged with attempting to possess narcotics and driving with a suspended license.

The bus was impounded by the city. No word yet as to when the kids on that route will ever get picked up from school.

DIAPER DRUG RING CLEANED UP

The discovery of 84 individual bags of **crack cocaine in a baby's diaper** led to a 20-year jail sentence Tuesday for the leader of a drug distribution ring in downtown Washington, D.C.

How it happened: two men were arrested in a city park for slapping and punching the two-year-old daughter of one of the men. When the girl was taken to the hospital for treatment, the cocaine was discovered inside the child's diaper. The drugs were traced back to District of Columbia crack kingpin, Crystal Jefferson, and she and eleven people were eventually convicted.

TRP is, of course, completely shocked that the two-year-old was not convicted as well. What is this country becoming, when *two-year-olds* can get away with dealing crack? We're just sick about this. *What kind of message is this sending to other two-year-olds?*

O'HARE INTERNATIONAL POT FARM BUSTED

After a week of hiding in a remote field near O'Hare International Airport, Chicago police finally managed to bust Noe Larrios-Guzman, 19, for growing over 1,500 marijuana plants ranging in height from 4 to 6 feet tall. The crop was allegedly worth \$2.5 million. "That's a lot of reefer," police spokesman Patrick Camden quipped.

ILLEGAL MONKEY BUSINESS

In Dhaka, Bangladesh, police claim to have rescued two spider monkeys who had been trained to sell drugs by recognizing the colors of different currency. The story goes something like this: "When addicts entered the house, the monkeys met them... if a visitor handed cash to the female, Munni, then Hamid, the male, would get the drugs from the roof, from under the bed or from another hiding place. Munni handled only 50- or 100-taka paper notes, and was trained to tell the difference by their color... a 100-taka note is black and white and a 50-taka note is red."

The owners of the monkeys apparently face the death penalty if convicted. This begs the question — which, as usual, TRP is not afraid to ask — *why are they letting the monkeys off the hook? What kind of signal does this send to the trained monkeys of the world — that they can get away with drug peddling for a living instead of dancing tuneful jigs while balanced on giant beach balls? What is this world coming to?* Ahem.

NOTABLE SEIZURES

In an operation that netted 49 arrests in Holland and Israel, over a million Ecstasy pills were seized, along with arms, explosives, large sums of cash, three ecstasy labs, and a large marijuana field. In a two-week push called Operation Columbus, authorities arrested nearly 1,300 people in Trinidad and Tobago, Grenada, Barbados, St. Vincent and the Grenadines, St. Lucia, Aruba, Curacao, Jamaica, Haiti, the Dominican Republic, Puerto Rico, Panama, Colombia, Venezuela and Surinam; the operation seized 1,984 pounds of cocaine, 20 pounds of heroin, 1,207 tons of marijuana, 1,250 gallons of hashish oil and 22 pounds of opium poppy seeds, as well as 38 firearms, 26 vehicles, 27 boats, a plane and \$215,000 in counterfeit U.S. currency. In Sydney, three Chinese men were arrested and over 176 pounds of heroin were seized, the largest single seizure in Australia that year. In what is being called Denmark's biggest narcotics case, two men were convicted of attempting to smuggle 114 pounds of heroin. And in what is being called Europe's biggest cocaine seizure, the Spanish Navy seized over 10 tons of cocaine.

ONE-DAY HEROIN DETOX

Intensive Narcotic Detoxification Centers of America, LLC (INDCA) settled a patent infringement suit against The UniQual Network, LLC (UniQual), for the use of **Intensive Narcotic Detoxification**, an anesthesia-assisted one-day detox procedure for heroin addiction and dependencies on methadone, painkillers and other opiates. The patent is based on use of the drug nalmefene administered intravenously during a medical procedure. INDCA has found that nalmefene works as a superior opiate antagonist for this purpose.

One-day opiate detox under anesthesia has been performed in Europe for more than fifteen years, and was introduced to the United States about four years ago. While sleeping comfortably, the patient is propelled through an accelerated withdrawal and does not experience the painful symptoms of typical "cold turkey." Having successfully settled its lawsuit against UniQual, INDCA now plans to license its proprietary, patent-protected IND procedure to providers throughout the United States, and does not rule out the possibility of pursuing infringement proceedings against other parties believed to be infringing on the patent and other related patents.

Meanwhile, another news story reports on

a doctor who agreed to stop treating heroin addicts with an unnamed "controversial rapid detox procedure" that was linked by state investigators to the **deaths of six of his patients**. The doctor defended the practice, saying, "I was trying to help." The story reports that the treatment costs \$2,900 to \$3,600 and is not covered by most health insurance plans. The doctor estimated he had performed the ultra rapid detox on 2,300 patients at his clinic since 1995 with few incidents. His lawyer claimed there is no evidence the deaths were caused by the treatment, and claims at least two deaths were related to subsequent cocaine use by the patients.

CASUALTIES IN THE WAR ON DRUGS

Since TRP 4 was published: a Nigerian and an Afghan were beheaded in Saudi Arabia for smuggling an unspecified amount of heroin and cocaine into the kingdom. Executions usually are carried out with a sword in public. In the ex-Soviet state of Tajikistan, border guards patrolling Tajikistan's southern flank shot dead three men trying to cross illegally from neighboring Afghanistan with 305 pounds of heroin. Tajikistan is a popular

conduit for drug traffickers transporting narcotics to the West from Afghanistan, the world's largest opium producer and source of half the world's opium supply. In Thailand, Narcotics Suppression Police shot and killed at least 29 alleged drug traffickers on the common border with Myanmar. The head of the NSP was quoted as saying, "Alien drug traffickers from a neighboring country are becoming increasingly rampant. The only way to deal with these people is to execute them on the spot." In Iran, Iranian troops killed 25 drug traffickers in clashes near the border with Afghanistan and seized one ton of drugs; Iran is another key route for drug trafficking from Afghanistan to the lucrative narcotics markets of Europe and the Arab states. In Vietnam, 49 people were sentenced to death last year for drug-related crimes. And in Bessemer, Alabama, a \$5,000 reward was offered for information about a missing 2-year-old girl whose mother told police she traded the child for crack cocaine. The mother said she traded her daughter to someone for crack, but couldn't remember who because she was high when it happened. The mother was arrested and charged with child abuse and child abandonment; at the time of the news story, the child had been missing for almost six months.

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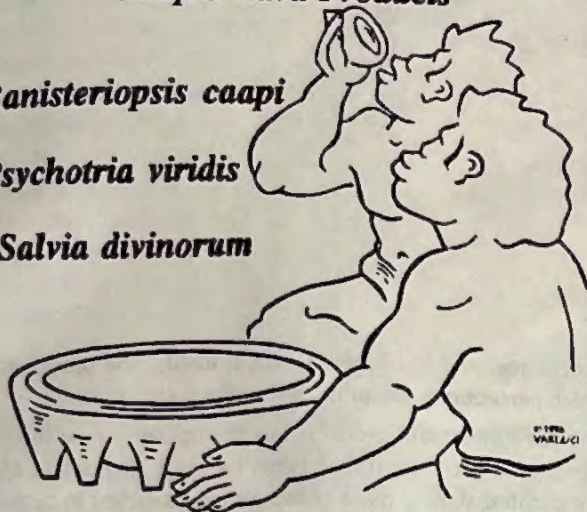
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QUESTIONS

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QUESTIONS OF CONSCIOUSNESS

by Ryan Hastings

Before the latter half of this century, questions of consciousness were best left to philosophy. But science has begun to push into that conversation, which began with self-consciousness and has grown into a bewildering variety of arguments and theories. Chemistry, biology, mathematics, and physics are contributing to an interdisciplinary science of mind. Many mysteries remain, and we have much to learn — some suggest that we will never fully understand human consciousness, but only lower-order, simpler, systems. But we have learned a great deal, and the most modern sciences and the recent revolution of the facts of fractals open the way for scientific and philosophic communities to forward reasonable suggestions for how consciousness works.

The approach which has gained in popularity, and which seems to produce the most plausible models, is the dialogue between neuroscience, psychology, and phenomenology. Neurosciences detail how the brain works. Psychology postulates models for the mind, imagining systems that account for empirical results found through experimentation. Phenomenology is the philosophic pursuit of identifying and describing subjective experience and its contents. These fields are insufficient to tackle the hard problem of consciousness alone, but when the observations and ideas are compared, a powerful program grows. In this article, I'll focus on the work done in the scientific disciplines.

Neuroscience can tell us how the brain works, but one cannot build a theory of mind from a complex network of interconnected cells. The properties of consciousness are emergent from the complexity, and cannot be predicted simply by knowing the physiological nitty-gritty of the wetware in which consciousness instantiates.

Psychology describes mental operations, finds laws governing their behavior. Like anything else in nature, the mind works according to certain natural principles. None of this answers the question, though, of what consciousness has to do with anything. This problem was clearly formulated by Ray Jackendoff in his 1986 work, *Consciousness and the Computational Mind*. "Mind" can be used in two senses — one can speak of the "phenomenological mind," our world of perceptual and reflective

experience, and the "computational mind," the processes by which perceptions, thoughts, and feelings are produced.

The mind/brain problem was multiplied — now there's a mind/mind problem. If that weren't enough, the details of the computational mind make consciousness as useless to cognitive psychology as it was to behaviorist psychology three decades ago. These computations could conceivably be carried out by a machine (for example, an AI) which possesses a computational mind without having any subjective experience. This mind/mind problem can now be addressed with neuroscience.

CONSCIOUSNESS AND THE BRAIN

Researchers used to assume that there was some part of the brain where consciousness resides — where all the sensed world is evaluated and a course of action decided. As far as we know, no such consciousness module exists. There is no part of the brain whose removal would result in the removal of consciousness, but leave all the other mental operations intact. Damage to parts of the brain damage parts of the entirety of conscious experience — consciousness is related to the global state of the brain.

A lesion in a particular part of the brain causes *propasagnosia* — the inability to recognize faces. No matter how well known, no matter how close emotionally, a *propasagnosic* is incapable of assigning a name to a picture of a face. Yet, empirical evidence suggests that some sort of facial perception is taking place. For instance, if the patient is shown a picture of a famous person, she can guess the correct name from a list of names statistically better than if she had never seen the face before.

The tempting trap which many psychologists fall into is supposing that the perception is occurring but for some reason not reaching consciousness. This follows from the assumption that complex cognitive procedures can take place without consciousness.

Neuropsychologist Marcel Kinsbourne disputes this. Clearly, the perceptual task is *not* taking place in the absence of consciousness. Though the results are better than random for name-guessing experiments and similar psychologic sleight-of-hand tricks, they are still quite poor. Consciousness is required for this task to take place. The damaged tissue has not been completely destroyed, a rudimentary degree of facial perception

can still occur and exert an unconscious influence, but not enough of an influence that it could be consciously recognized and reported.

Kinsbourne starts with this and presents a hypothesis which differs from previous models for the neural correlate of consciousness (sometimes abbreviated NCC). Many models suggest that consciousness emerges from a particular anatomical or physiologic feature (such as 40 Hz oscillations of activity that spread through the dense feedback loops in the thalamocortical system, synchronizing perceptions from many different sense modalities, an idea we'll pick up again later). Kinsbourne instead looks at what qualities a cluster of neurons firing their messages (such as those responsible for perceiving the motion of leaves in the wind, or an idea for a paper) must have in order to be conscious.

REPRESENTATIONS & CONSCIOUSNESS

The brain is the most complex system of which we know. Even conservative estimates suggest more potential states for the system formed by the connections between nerve cells in the brain than the number of fundamental particles that physicists estimate to exist in the known Universe. Physical energy — heat, light, air vibration, pressure, temperature, or even molecules (of smell and taste) — is transduced into a neurologic code, written in patterns of neural firing that trace fractal shapes in the electrochemical soup. This code is called a "representation," a pattern of activity in a group of nerve cells representing some mental activity. Every thought, every perception, every memory is represented in the nervous system.

Conscious, attentive states involve the brain entering a self-organizing critical (SOC) state. Thunderstorms and rush hour traffic are SOC's. They are a delicate balance of forces where small adjustments can be amplified into major changes in the whole system. Anyone who has spent any time with a cellular automata artificial life program has seen the dynamics of an SOC. (Anyone who hasn't but who is interested in nonlinear dynamics and chaos would do well to type "cellular automata" into a search engine and find some shareware.) Cellular automata present the user with a checkerboard, with each of the squares in either an "on" (or

"alive") or "off" (or "dead") state. The program then cycles through, and if a specified number of adjacent squares are "on," then the square will be "on," and if a specified number are "off," then the square will be turned "off."

Patterns of growth and evolution crawl across the screen. At first, the behavior of the entire system seems random, but very quickly it can stabilize into patterns organized around mathematical attractors. One can disturb the system by changing a particular square.

Some changes don't affect the attractors much, and the system remains stable.

But a change in the right place can cause the entire system to reorganize around new attractors. (This reorganization is called a bifurcation.)

This is what an attentive conscious state is like. Certain attractors dominate

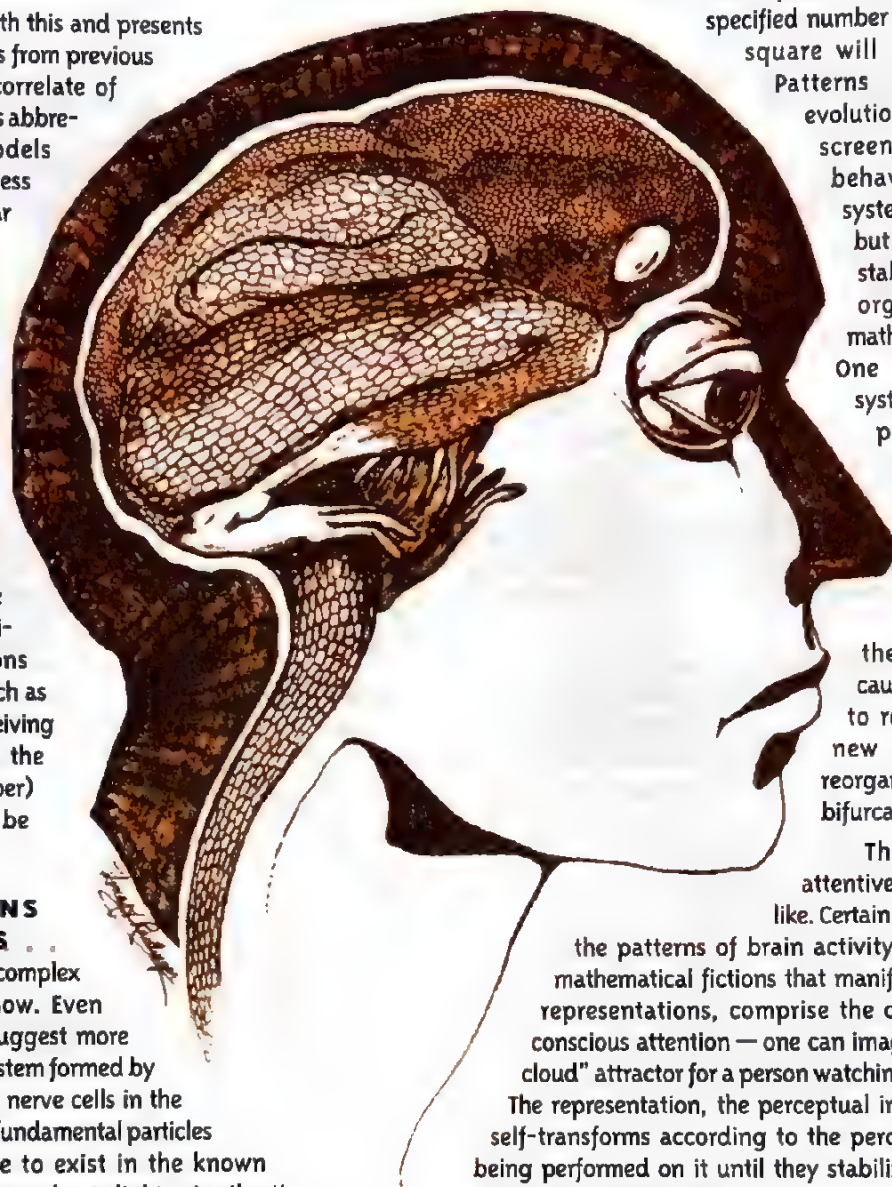
the patterns of brain activity. These attractors, mathematical fictions that manifest in the neuronal representations, comprise the dominant focus of conscious attention — one can imagine a "fluffy white cloud" attractor for a person watching shapes in the sky.

The representation, the perceptual information, rapidly self-transforms according to the perceptual procedures being performed on it until they stabilize into a form that reaches consciousness.

So, then, which representations end up playing a role in consciousness? Kinsbourne suggests any representation which has a sufficient duration, a sufficient level of activation (intensity or complexity), and congruence with the entirety of the mind/brain.

A representation must last in a stable form for long enough to be included in a conscious report. Subliminal perception provides a fine example of this rule — if the stimulus is flashed too briefly, then although the object is perceived, the perception does not last long enough to be noticed or remembered.

A representation must have a sufficient level of activation — a sufficient number of neurons in the cell assembly must be devoted to the representation. This simultaneously suggests a complexity of perception and level of intensity which prevents the representation from being lost in the noise of unnoticed sense-data. Propasagnostics lack this — the cell assemblies devoted to facial perception are damaged. Not enough neurons can participate to merit conscious attention and recollection.



Finally, the representation must be congruent with the mind/brain. Contents which break the continuum of experience (an illusion edited from the discontinuous and disparate events of consciousness) are unconscious and unremembered. Cases of dissociative personality disorders are clear examples of this on a psychologic level — sequences of memory are blocked from conscious recall, or in extreme situations assigned to a new personality altogether. At a neurological level, we see that the representations themselves must be brought into synchrony in order to be conscious. Unsynchronized neural activity is unconscious, even if it subtly affects the global state of the brain.

A brief word on synchrony, or the "binding problem": How is it that we experience simultaneity of different sense modalities? Why is it that we see someone's lips moving and hear their words synched up with the visual, when these perceptual processes take place at different rates? These aren't directly, physiologically linked anywhere in the wetware, so why do they seem linked in experience?

Almost all sensation — sight, sound, taste, interoreceptive information on body states, proprioceptive accounts of body position, most everything but smell — passes through the thalamus. The thalamus is a structure deep in the midbrain. It connects to the cerebral cortex through ascending pathways (carrying impulses up to the cortex for complex perception) and descending pathways (feedback from the cortex). The thalamus serves as a relay station, modulating the sense-data according to the demands of the cortex. Perception emerges from the conversation between the two, in a complex feedback loop.

Anyone whose ears have been split by the audio feedback of a concert knows that feedback systems can become oscillators. The thalamocortical system is no exception. Neural activity in disparate areas (such as visual and audio cortex) fall into a synchronized rhythm, which magneto-encephalographers measure to be 40 Hz.

This rhythm is reset when a novel stimulus is presented. Rudolpho Llinas suggests that this is a refresh rate for the brain — that every 25 milliseconds, we experience a new conscious moment.

THE MIND/MIND PROBLEM

Kinsbourne's neurodynamical notions can be brought back into cognitive science to solve Jackendoff's riddles, and with this I will conclude.

Remember, the computationalist approach in cognitive science presents a problem. The mind is split between the cognitive architectures and operations which process information to give sensations, perceptions, thoughts, decisions, behaviors, and the personal, subjective experience of those products of the processing (while being blind to the operations themselves). This compounds the mind/brain problem into a computational mind/brain problem (how does the cognitive architecture relate to the neural

architecture?) and a phenomenological mind/brain problem (how does experience relate to the brain?), and a computational mind/phenomenal mind problem.

This article has taken the embodied or dynamical approach to cognitive science. It examines the mind as embodied in the brain; the cognitive operations are embodied in the neural operations. The synchronization of neural assemblies in the thalamocortical system into stable patterns that represent the contents of consciousness is the leading hypothesis for a solution to the phenomenological mind/brain problem. It is tempting to simply cast aside the more abstract computational approach, then, neuroscience having succeeded where computationalism has apparently failed.

However, in doing this, one runs the risk of tossing out infants with the wash waste. Computational models continue to be useful in examining consciousness. For example, considering mental tasks as though a computer were performing them helps us formulate hypotheses about the mechanisms of human consciousness, leading to new experiments revealing yet more data to be incorporated into a theory of mind. The brain *does* perform computations on sense-data, and complex cortical functions are still better modeled with the computer metaphor.

So what is this computational mind? It is what drives the transformations which the representation moves through as it becomes the form which will reach consciousness. In our neurodynamical model, this correlates to the mathematics arising from the specific interconnections in the neuronal ensembles. It is the chaos of the brain state that drives it, and the self-organization of the representation is also a self-computation. So much for the computational mind/brain problem.

And the mind/mind problem? One oft repeated mantra in cognitive neuroscience is, "Mind is something brain does." Subjective experience emerges from the chaotic complexity of the brain. That chaos is a computer, and the phenomenal mind is as emergent as any of the phenomena.

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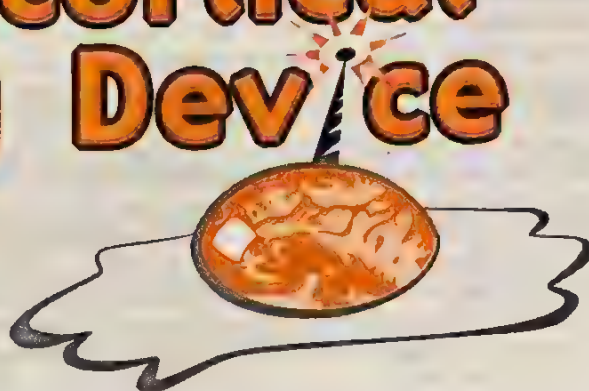
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This is your Brain on a Transcortical Stimulating Device

Interview with neurologist Prof. David Presti
by Malvolio Rutledge



In case you haven't heard, this is the century of the brain. Brain science has metamorphosed from Neolithic trepanning and Great Society lobotomy (still being done on junkies in Russia and South America) to a rigorous science, involving vast amounts of new information never before known. I spoke with an authority on the subject, David Presti Ph.D. of the University of California at Berkeley, on a wide range of subjects, from brain chemistry to Prozac, and the history and causes of the drug war. Presti is a lecturer in neurology and also works at the Haight-Ashbury Free Clinic in San Francisco as a clinician, where he helps people with drug addictions.

TRP: What are your comments on the current state of brain science?

DP: Well, brain science is a very exciting frontier. Everyone makes the connection between our brains and our behavior and we believe that our brain has a lot to do with our behavior. The evidence for that is pretty direct; that is, if you damage the brain you get profound changes in behavior that don't happen if you damage other parts of the body. So we put it together that there is a relationship there. With the advances in technology that have happened in the last twenty years that have now been applied to brain science, it is possible to ask and get answers to very interesting questions that we never had ways to ask before. It's a combination of being interesting and being do-able. Outer space and trying to see whether there's life on other planets and exploring the large-scale structure of the universe is also very interesting and exciting but we can't do it. We don't have the technology available. But with the brain, there are profoundly interesting questions that can now be asked with imaging technologies, things like functional magnetic resonance imaging, PET scans, ways to actually see what's happening in a living human brain. So we might actually be able to get some information about what are the processes in the brain that correspond to mental states like awareness and changes in consciousness and these sorts of things.

TRP: Is the whole right brain/left brain dichotomy still considered valid or has it been pretty much shelved as another fad?

DP: It's definitely considered valid. There's a way in which the whole left brain/right brain specialization got overly magnified by the popular press. But it's very clearly still true that the two halves of the brain do different things. There are a lot of similarities between what they do and there are profound differences. This can now be very clearly visualized with the functional imaging techniques. There are differences in the functioning in the hemispheres. The old description of the left hemisphere is that it is more language-oriented, logical, linear, mathematical, and that still holds up for some things. And the right hemisphere is more Gestalt, non-verbal, big-picture stuff — that's still accurate and these things will show up on functional imaging. The old EEGs (electroencephalographs) were too crude really to show the differences the way the new technology can.

TRP: You can localize, say, picking up objects, but what about mapping something like discoursing on economics or creating poetry? How will that ever be mapped?

DP: It's a long way off. There is this tendency to build up a lot of information about what parts of the brain are doing what when, but it may not really be telling you that much. So at the same time you need to have cleverly designed experiments which will help address the really interesting questions. So we have on the one hand the building up of an increasingly large amount of knowledge and information about the brain, and although that may not answer the big questions, it will form a landscape upon which those questions can be asked and data that can be drawn from in the future. As far as being able to talk about what's going on in the brain when we philosophize or discourse about economics or create poetry — that's a long way off. However, I think it's within the realm of what we will be able to ask within the next few years with these new technologies. We still have no real operational definition of what states of consciousness really are or mental states or thoughts with particular content or emotions. We believe that this is all related to nerve cell activity in the brain in certain circuits going on and certain neural transmitters being released. We don't know how that is actually related to subjective experiences. That's really the biggest gap which is of interest in addressing scientifically. We're building up more and more knowledge of neural transmitters and receptors and how different chemicals affect them. But how this actually ties in to the kinds of states of brain functions that we experience as thoughts and emotions and particular creative acts like poetry, we have no ideas at this point.

TRP: Still "forbiddingly alien".

DP: Yeah. Although not beyond the realm of being able to ask questions. A few years ago we had no idea how to do this. But now we are getting a better sense about how to ask the big picture questions.

TRP: Have you heard about E.O. Wilson's idea of "Mind Script"? That you could create a language from mental imaging just by viewing brain function while it's doing something and then taking those

coordinates and condensing them in something like different Chinese ideograms?

DP: If we were able to map brain activity carefully enough and then produce some way of stimulating that activity, that's not too far out. In a crude way that's already done. For example, we know that the rear part of the brain is involved in vision and analyzing information that comes into our eyes, to give us the experience of the visual world. So when we see stuff there's all kinds of complicated electrical activity going on all over our brains but especially in the posterior part. If we take a magnetic stimulating device, which is basically just a little magnetic coil, and put it above the back of the brain outside the skull, just set it there next to the head, and give it a jolt of electricity to produce a magnetic field that then goes through the skull and electrically zaps the neurons in there so they start firing, you can actually generate visual images in people. But it's rather random; we don't know how to produce a carefully designed enough outside electromagnetic stimulus to produce some predictable response in a person's visual experience, but you can get them to see flashes of light and hallucinatory stuff like that. Or if you stimulate the front part of the brain that controls movement, you can get jerking of the arms and stuff like that. So in a crude way we can stimulate the brain from the outside and get people to experience things. And as we get more and more refined in our ability to map brain function and then create stimulating devices to stimulate it we may be able to do stuff like that.

It's also now possible to implant electrical stimulating devices in the brain. The one place this is done so far is in the treatment of Parkinson's disease. Parkinson's disease is a movement disorder due to a loss of particular neurons from cell death, probably as a result of exposure from toxins of various sorts that we are all exposed to. Patients lose the ability to initiate movements and they suffer from severe tremors and so forth. This affects a large number of people, especially elderly people. A stimulating electrode can be implanted in a particular part of the brain called the motor thalamus, and actually overcome some of the problems that Parkinsonian patients have. When they experience their symptoms in a severe way they have a little switch they can turn on, which is imbedded in their shoulder, and they can use a magnet to run over the switch and turn it on.

TRP: Is that happening now?

DP: Yes. These surgeries are being done quite frequently and they work. If you can implant an electrode in that part of the brain and stimulate it, in principal you can implant an electrode anywhere in the brain and stimulate it. You can imagine having an electrode implanted in the circuitry that controls mood in some way, so that when you stimulated these circuits you would feel better. That's theoretically possible. We think we know enough about some of this circuitry now to make some guesses as to where they are.

TRP: Do you think these circuitry boxes are the wave of the future for teeny-boppers? Something fun to do at parties?

DP: I don't. It's much too complex an enterprise. We're talking big-time brain surgery here to implant these things. This is not something you do on the weekend. But on the other hand these external stimulating devices, if they could ever be refined and perfected enough to actually target particular areas of the brain, it's conceivable that might lead to some sort of external stimulation.

TRP: A lot of people think that would be the *summum bonum* of advertising: You could beam a desire into someone's brain... like if the Gap could get a control tower and zap people...

DP: Yeah, with a trans-cortical stimulating device. But I don't think the Gap's going to be able to do this. To actually be able to stimulate a particular pathway so specifically as to generate the thought of a particular product — I don't rule anything out as being possible at some point in the future, but that is so inconceivable...

TRP: Is it really? It seems like television is the device influencing the most brains.

DP: It is being done through the media. It's absolutely being done through television, radio, other sorts of advertising. But it's not being done directly to the neural circuitry.

TRP: It seems like a lot of neuroscience just views the human body and brain as a brute machine.

DP: That certainly is the stance of most science and most biological science, that the organism is treated more or less like a machine. A definable or knowable mechanical structure, at the atomic or molecular level. And behaviors are related to the operations of chemicals and physical processes going on at the molecular level at a machine-like way. The human brain is by far the most complex structure we know of in the universe: a hundred billion or more nerve cells, each of which is connected to hundreds or thousands of other nerve cells. It's phenomenally complex. But the underlying guiding hypothesis, so to speak, is that as we learn more and more about the brain, we will somehow be able to intervene in the processes in some way, as I've already described in the treatment of Parkinson's disease for example.

TRP: What do you think the future of Prozac is? It has swept the Western world in a revolutionary way.

DP: It is a revolution. The new generation anti-depressant medications, of which Prozac was the first to come on the market, are very profoundly affecting our conception of the brain and our understanding of brain chemistry. It truly is a revolution. I like to point to various things that I think were revolutionary in the history of brain chemistry, and I think Prozac and the other medications in its class are the most recent example of that. It has made neural chemistry something more than just the esoterica of brain science. It's now cocktail party discussion. Into the popular press. Into the daily newspaper. You can now open up a newspaper and see pictures of neurons releasing serotonin. It's now clear that small amounts of chemicals can have a profound impact on the function of the brain and through that, the behavior of people. Now, what that means for society is very interesting and I think we have an experiment in progress here. Millions of people are taking these medications for long periods of time. Originally they were intended for severe depression. But it has become apparent that they seem to help the functioning of people who aren't clinically depressed. Many people respond very positively to the things they feel they're getting from these drugs. There don't seem to be severe toxic effects that have come out in any way at this point. We don't know what the future will hold. This is an experiment in progress. We don't know what the implications are of taking something for ten, twenty, thirty years, perturbing the body chemistry for that long. Maybe nothing, maybe something.

TRP: There must be something. There are occasional violent outbreaks with people on Prozac.

DP: I question that — at least according to the statistical analysis that I've read. There are so many people taking the medications that there will be a base rate that will commit violence or suicide. My reading of the literature is that there is no higher frequency in violence or suicide. But in fact, what happens is the media often focuses on that, when something does happen. For example, there's an article

that I often use in class about a guy who three or four years ago tried to set off a bomb in the New York subway. He had a bomb on him, and he got busted. It said in the news article that he was taking Prozac. They said it twice, at the beginning of the article and at the end of the article. So people read that and they see it twice. The first thing they see in the article and the last thing they see in the article. But down the page, same paper, same day, there was another article about a police officer who committed suicide. It didn't say he wasn't on Prozac in that article, he probably wasn't, otherwise they would have mentioned it. The point is, these things happen all the time, and it's never pointed out when folks aren't on Prozac, but it's always or frequently pointed out when they are. So there is a perception that these kinds of things happen more often.

TRP: It's true, it does seem to get sensationalized. But I find it hard to believe that there's no correlation at all. For instance, one of the assassins at Columbine was on Luvox. I'm not saying Luvox was the reason it happened but that it must have been a factor, because those medications are involved in directly affecting the perception and emotional states of the brain. The drug is manipulating the brain's chemistry in uncertain, yet significant ways.

DP: But I think it's important to point out that without very careful analysis, in a controlled way, of who is taking what and who is committing what kinds of behaviors, you can't make statements that Luvox had anything to do with this guy's behavior. The guy was pretty screwed up before he started taking these medications.

TRP: What about the controversy of MDMA toxicity and the brain?

DP: Whenever we impose chemicals into the normal balance of the complex chemistry of our brain, there is a potential for adverse things to happen. And MDMA is an example, at least based on animal studies, that can have toxic effects on serotonin nerve cells, in that it causes a deterioration of the nerve terminals, some of which regrow with time and some of which don't seem to, according to limited studies in monkeys and rats. We don't know what the implications are for people. It also, of course, has a history of being a very useful drug in psychotherapy and so forth. So it's unfortunate that it may have these effects on serotonin brain chemistry too. But I think more research is needed, and some degree of caution is needed. I find it disturbing that there are people out there who take multiple doses of MDMA week after week after week, in the rave scene and so forth. We don't know what the implications of that are going to be. I hope there is a way to stay in contact with those folks and continue to study them over time, because, again, that's an experiment in progress. I think we need to be cautious about what the long term effects might be.

TRP: On a national night time radio show, called "Love Line," a doctor and a loud-mouth sidekick field questions from troubled people, mostly teens. A kid called up and wanted to know about LSD. The doctor wanted to dissuade him from using the drug and told him and all the listeners it was a "neurotoxin."

DP: First of all, you have to find out what he meant by that. I can tell you what we know about LSD. There's no data that suggests that LSD has any direct lethal effect on brain cells. For a healthy person, there's evidence that suggests that LSD used appropriately does not cause any adverse consequences. At the same time, there are cases of small

numbers of people that report long-term perceptual and emotional instability that may be associated with LSD use. Any time you have a problem with visual perception that doesn't go away, that suggests there has been some kind of long term or permanent change in the circuitry in some way. This has never been studied in any kind of detailed way. It's not even certain that it's due to LSD. But there does seem to be an association there. It's a relatively small number of

This is an experiment in progress. We don't know what the implications are of taking something for ten, twenty, thirty years, perturbing the body chemistry for that long. Maybe nothing, maybe something.

people compared to the millions that have been exposed to it. But in the usual interpretation of what we mean by "neurotoxic", no, there's no evidence that LSD is neurotoxic. Up to this point, that is.

TRP: What do you think is the real basis behind the drug war?

DP: It's complex. Part of it has to do with historical accident and the resulting economic enterprises that generate it. In this country, alcohol and tobacco are the historically accepted drugs. They were the ones that society decided to adopt way back when; in fact, this country was partly founded as a place to grow tobacco. Tobacco was discovered in the Americas and when the rest of the world became addicted to it, people discovered they could make a lot of money by growing it. So the original American colonies were partly there to farm tobacco for Europe. So tobacco and alcohol have been invested with the economic base to make them the drugs of choice. And everything else is competition. There's a real vested interest in keeping those drugs legal and available to generate profit, and everything else illegal.

There's also the issue that the entheogenic substances appear to be associated with changes in consciousness that generate new ways of looking at the world, and one's relationship with the world, and don't often propagate the status quo way of doing things. That's definitely what happened to marijuana and LSD associated substances back in the 1960s. They became very much linked with the anti-Vietnam war, anti-establishment mentality. That was perhaps the major reason they were banned from use and research. There was a huge research enterprise to try and figure out what the therapeutic uses of LSD might have been back in the 1950s and '60s. But that was all completely ended.

TRP: Do you see the tide slowly turning? Or do you think it will remain the iron fist the way it has been?

DP: I don't think there's any turning. I think there are some small chinks of light that may be expanded upon in some way, such as the appreciation of the medicinal effects of marijuana and the opening up and softening of attitudes in the federal government around allowing research to occur with LSD, MDMA and other schedule one drugs. There is a limited amount of that research now going on and an openness to having more such research done, if people argue for well-designed studies. But I don't think that's a "turning of the tide". There's an opportunity here for good science to become possible again with these substances if it's done carefully.

PARATHEATRICAL RESEARCH

THE MIRACULOUS INTERACTIONS OF SELF-GOVERNING BODIES

by Antero Alli

Antero Alli is widely known for his seminal Falcon Press works *Angel Tech*, *The Akashic Record Player*, and *All Rites Reversed: Ritual Technology for Source Relations*. Now TRP is proud to offer Chapter One from Antero's new revision of *All Rites Reversed* (New Falcon Publications; Winter, 1999). Antero's non-dogmatic ritual approach — influenced by Polish theatre pioneer Jerzy Grotowski's original paratheatrical explorations — is of great interest to those seeking new and interesting technologies for unlocking altered states of consciousness, and realizing more reality.

Since the inception of this process known as paratheatrical research (Berkeley CA, circa 1977), I've been directing individuals in rituals designed to trigger miraculous interactions. They are miraculous insofar as they invoke (by sound & word) and evoke (by feeling & motion) strong internal resonances with vertical sources and their expression through vocal creations, movement and ritual interaction with the horizontal plane of the world. This essay attempts to address more precisely what is meant by vertical and horizontal planes in the context of idiosyncratic ritual design and execution. In his book, *The Gospel of Relativity* (Harper & Row, 1973), Walter Starcke coined the term "double vision" to address an altered state of consciousness permitting a simultaneous awareness of vertical, or spiritual, sources and their outward, or horizontal, transmission in and with the world around us.

The horizontal realm, as Starcke points out, infers all interactions with others, society and "the out-there world at large"; the vertical realm refers to one's internal contact point with the "stars above, the soul within and the Earth below." It is my assumption that the dynamic interaction between the absolute (vertical) and the relative (horizontal) realms is as close as we can get to the miraculous inside the human condition. Whenever individuals choose to interact with each other from a point of vertical integrity, the miraculous is invoked.

Realizing one's vertical stability — in any given moment and over a lifetime — demands a steady reliance on internal spiritual sources for guidance and inspiration. This type of internal dependence was not taught in school. Nor did most of our parents tell us how to do it; this new habit must be learned. To re-establish resonance and rapport with vertical sources is often an uphill struggle against the grain of decades of horizontally-directed habit patterns. This struggle often involves painful disillusionment and sometimes, an outright renunciation or rebellion against all social dogma, spoonfed religion and/or externally imposed belief systems. Yet, it is not enough to merely reject and rebel against the socio-moral conventions of our time; to do so is to remain gagged and bound to the conventions by the glue of our own resistance. The power of socially-accepted dogmas and conditionings must be replaced by a fierce commitment to your own truth and the ongoing courage to earn its free expression every day of your life. This is difficult work.

Paratheatrical research requires tremendous personal effort in a self-disciplined approach to the total offering of the self. If there was an ultimate goal to this work, this is it. Historically, the miraculous has engaged a small portion of the populace given to exciting new forms of human experience that find expression in new rituals for community-building and subcultural revolution: monks, mystics, artists, poets, fringe-dwelling rebels. The miraculous, it seems, is not for everybody. Not everyone has the patience, compassion and drive for surrendering to their vertical sources while sharing this presence with the world. Those that do eventually face, and hopefully learn to live with, a terrible yet liberating truth: this consumer-based, materialist society has been lockjawed into a non-stop, horizontal feeding frenzy for a very long, long time.

SELF-COMMITMENT AND VERTICAL STABILITY

To lose touch with the vertical is to lose purpose. This loss of verticality contributes to self-trivialization. Our lives are squandered in meaningless pursuits that disperse vital energies, not to mention the knowledge of what is most essential to our lives. Loss of vertical stability also results from the fixation of attention onto random ideas and images while losing context, a connection with the realities those images supposedly represent — eating the menu instead of the meal. On the other extreme, those who lose horizontal connection can suffer profound alienation and suicidal tendencies from a breakdown of human community, or common-unity; isolated, we grow brittle, wither away inwardly and slowly go mad from sheer loneliness.

Paratheatrical research work aims to develop ritual forms for restoring verticality as a basis for relating with the horizontal world of others from a fierce stance of personal integrity and autonomy. To work as a group towards this end is very challenging; to live your life this way is almost impossible: it is miraculous. To fully participate in the "resurgence of the miraculous" one must embrace a kind of double vision — one eye to the vertical, another to the horizontal — and proceed accordingly. Instigating a vertical value into a group runs against the grain of social expectations. Most gatherings offer socially-accepted (horizontal) promises. Our most common social rewards promise entertainment, intellectual stimulus, emotional support, ego status, and courtship potential.



When these social motives are bypassed and then replaced by more austere asocial intentions (such as Source relations and No-Form), our more social incentives collapse; there's nowhere for them to go. In its initial stages, asocial reasons for gathering together require from each individual a certain non-responsibility to others. At first, this can act as a kind of anxiety-producing social shock, until we are assured of its long term value for building higher levels of human interaction; "higher" means anything that supports a deepening of individual integrity and a heightening individual and group autonomy during all horizontal interaction.

An asocial intention for meeting can be socially sanctioned by a vow each individual takes to become totally responsible for their own safety and for their own creative states. This pledge assists the process of releasing the group from socially-ingrained obligations for seeking or giving assurance, approval and other considered behavior. When a group understands from the very start that it is working towards cultivating an asocial climate for ritual purposes, the ground is being tilled for the miraculous.

The first ritual task is learning to take your attention off yourself and to put it on the space. In paratheatrical process this literally starts by each participant relating to the space — of the setting or dance studio — before relating to the things and/or people in that space. Everyone finds a way to honor the space by physically moving through that space. This task can take anywhere from five to twenty minutes and it initiates each and every paratheatrical session. Once

the space itself has been sanctified, each person locates a region within the setting to take temporary dominion over. This area is called the personal area and it's where each person's physical warm-up takes place. You find your own way to your personal area, ideally without any mental or social consideration, i.e., the desire to be next to a window or near someone you find attractive.

The asocial intent here can be realized by dropping down out of your head and into the body of your five senses and your impulses. Once you find your personal area (or once it finds you), you put your territorial instincts to work by owning that space as if it were your own. Much like animals stalk and claim turf, you find your own idiosyncratic ways to mark the outer boundaries and the center, and then proceed to take charge of this space. Every animal exercises territoriality; it turns into a human ritual when it's done on purpose. The objective: to concentrate your attention for the uninterrupted focus of internal dependence and for the accumulation of presence.

The next phase of building towards the miraculous involves the Physical Warm-Up cycle. One way to effectively control your own space through the physical warm-up process is by realizing the following four objectives in your own way. (Give each of these four phases 8-10 minutes to complete.) The overall objective of this physical warm-up cycle is feeling the body deeply. By meeting the body's central need to be felt deeply, the body is less prone to resist the invocation of archetypal forces.

THE PHYSICAL WARM-UP CYCLE

- 1) STILLNESS...any posture affording utter physical inaction
- 2) FLEXING THE SPINE...whatever renders the spine more flexible
- 3) STRETCHING MUSCLES...any moves to awaken sleeping muscles
- 4) HEAT...pacing oneself in any activity that breaks a sweat

***There is real power (not control),
real freedom (not security)
and real creativity (not entertainment)
stemming from an ongoing
personal rapport with the formless.***

THE CENTRAL VALUE OF NO-FORM

The limitless void is, as a rule, pointless to talk, think or write about. Its actuality is not subject to categorization by ideas, images or for that matter, anything conceptual mind is capable of creating to describe it. Yet, there are ways to refer to it and invite its effects. In everyday terms, it is perhaps the degree of comfort felt with not having to be anything or anybody...for being nothing, nobody. Our contemporary void-ignorant culture places little value on the No-Form state. Yet, real artists, radical philosophers and theoretical scientists have been relating with No-Form for aeons (though each have their own name for it). The majority of western society, however, has been well conditioned to avoid the void like the plague. After all, there are no security, status, symbolic or social rewards given out for being nothing. Who wants to be a "nobody"? Me, that's who. And anybody else fighting for their consciousness and sovereignty as awakening human beings in a sleepwalking, horizontally-identified society. As all self-governing bodies eventually realize, there is real power (not control), real freedom (not security) and real creativity (not entertainment) stemming from an ongoing personal rapport with the formless, invisible sources producing palpable, visible and material effects.

No-Form is a concept-free zone. In this ritual medium No-Form is approached in a standing position, rather than the more sedentary zazen sitting posture common to Zen. Here, the "uncarved block of our potential state" is valued more as a precursor to action than for its traditional Zen function as a gateway to enlightenment, or samadhi. The No-Form stance prepares you for cultivating the receptivity to being animated by a vertical source. No-Form is a device for engaging (at the start of each ritual) and dissolving (at the end of each ritual) our subjective identification with universal archetypal forces. Even though No-Form cannot be described or willed or summoned directly, the following conditions seem to be conducive to its practice: watching the breath; emphasizing the exhale; relaxing the desire to control and/or direct the outcome; adjusting one's No-Form stance to support balance and spinal alignment; to stand and let the body rest; anything that bypasses the internal monologue of thought fragments and disassociated imagery.

THE CONTACT POINT

From the state of No-Form any quality or force can be accessed through an existent contact point. The contact point is wherever direct, intuitive absorption of a particular energetic condition is already happening; one has only to locate it, in other words. It already exists. The contact point can localize in the body or out in the auric field enveloping the physical body. (As an ongoing reference, it may be useful for some to refer to these forces from a Jungian context, as in "aspects of the Self", i.e., The Four Elements, Masculine/Feminine, Destroyer-Creator-Nourisher, Shadow, Death, Chaos & Order, etc.) This ritual work remains uninterested in courting disembodied spirits; paratheatrical research is more creative than that. Due to the values of No-Form and solitude, this work also does not function well as psychodrama or group therapy; therapeutic catharsis may occur but is best not strived for - the reason, to not force or coerce the experience.

From No-Form, participants locate their contact point with an aspect of Self they choose to yield to. For example, when accessing the "masculine force" you surrender to your current state of masculine (regardless of its shape or whether or not you even know what it is). Masculine already exists as a living archetype; we do not need to imagine anything. Whenever possible, merge with its living force as it expands from the contact point throughout your body, moving you this way and that; allow it to infuse you with its quality, color and intensity. The orientation here is non-directional, rather than directional; the intent is to relax the tendency to control or direct the energy. By creating space for its expression through you, the energy guides you. Like clay in the hands of a great sculptor, you are learning to be "shaped" more than you are shaping... "created" more than you are creating... and "moved" more than you are moving. This non-directional orientation takes some practice and depends entirely on the authenticity of the No-Form experience.

In the initial training phases of paratheatrical work, the forces evoked in ceremony are all drawn from Oneself, what Jung calls aspects of The Self: that unifying, self-organizing entity we are expressions of. Ritual, at this phase, acts as a kind of non-performance oriented Theatre of Self. There is no audience. The pressure to perform is released and replaced by the purpose of Self-Initiation. Each individual contacts, and expresses in their own way, universal forces such as: Masculine & Feminine, Four Elements, Order and Chaos, Creative/Destructive/Nourishing, The Anima, The Animus, Sleep-Dream-Awakening, Colors, Death/Rebirth, etc. With vertically-animated individuals, group interaction no longer springs out of social obligation as much as from the ripening need to share with others the accumulating presence of self-remembering. In extended moments, a spontaneous eruption of presence circulates amidst the group, arranging participants in the patterns of its splendor and grace. This kind of grace can be exhausting and invigorating. It takes practice to maintain vertical integrity (commitment to the contact point) amidst the flurry of others simultaneously doing the same thing in their own ways.

A Candid Conversation with Antero Alli

TRP: You mentioned that your paratheatrical research sessions can often induce altered states of consciousness that are very similar to those felt on psychedelic substances.

AA: Especially psilocybin. Granted, I'm no brain chemist, but I think this paratheatrical work can excite a more or less balanced interaction of neuro-transmitter serotonin and the more opiate based endorphins in the body/brain feedback loop. This can also happen through any successfully concentrated effort of feeling the body deeply while opening up to some authentic receptivity and intimacy with void, or what we call No-Form: that capacity for being nothing, or nobody. In the right proportions, this dynamic mix can incite a deep intuition for direct experience of the infinite, the archetypal and timeless realm of nonlocality through the body. When we go there, we take our bodies with us. This alone may be one of the chief differences between entering altered states under digested psychoactive agents and going there through the hard work of triggering the same brain chemistry via a psychophysical discipline such as these paratheatrical rituals.

TRP: Do you find that the groups you pull together for these research sessions already have a good amount of experience navigating through altered states, whether they be psychedelic states or otherwise?

AA: It really varies; maybe half of those who've come to this work have navigated altered states using psychoactive substances but the other half have been surprisingly "drug-free." Since the physical levels of this work are fairly strenuous, those who are drawn to it tend to arrive with a history of healthy attitudes around their bodies — less self-denial around physicality, in other words. Without a ground of self-acceptance, it's almost impossible to do these rituals. Though people do this work for differing reasons, the chief start-up motive is to get high. In its initial phases this work can get you very high through various modes of active trance, kinetic ecstasy, emotional euphoria, and catharsis. This start-up hedonic motive often burns out after three or four sessions for most people. If no other reasons can be found or created for doing this work (besides getting high), people often quit from sheer frustration and/or boredom. Other motives might include levels of initiation, visionary states, inspiration, spiritual development, metaprogramming, and self-work, as Gurdjieff may have used that word (I am not part of any Gurdjieff group nor are these his rituals).

TRP: What role have psychedelics played with you personally over the years as your work has developed and evolved?

AA: The hefty body of my pharmaceutical research occurred between 1967 and 1976, with several hundred LSD journeys; add to this, perhaps several dozen peyote and mushroom trips. I stopped ingesting these agents when I began developing paratheatrical work in 1976 after realizing how these drugs were diminishing and distorting the natural sensitivity of my central nervous systems, especially the more subtle circuitry around the dendrites. I became motivated to restore that sensitivity for perceiving life's more subtle emanations, be that light, color, sound, sensation, or feeling. After several years of developing this ritual work I got my nervous system back, so to speak. Perhaps more important at the time, I found another way to get high and with minimal distortion. More recently, in 1996, I met ayahuasca. My journey was biased by the dismal fact of suffering from parasites (bad sushi). After being told by someone I respected that ayahuasca acted as a powerful anti-parasitic agent, I chose to drink huasca as medicine. I heard about the visions but cared more about my physical health. I was also privileged to be in dense rainforests at the time and was guided to actually cut the vines, blow the tobacco smoke, pick the leaves and prepare the brew the day before the dozen of us drank it. Unlike any other psychoactive agent, ayahuasca acted on the gut and motor centers well before the heart and head centers. As a result, I was able to take my body with me when I went there. I was also healed of those pesky worm entities.

TRP: Have you considered the possibility of using psychedelics as part of the paratheatrical sessions, or do you see the need for a pretty strong separation?

AA: I, personally, would not recommend mixing these levels at the same time and place. A powerful ritual, if approached with enough self-discipline, honesty and clarity of intent, is trigger enough for parting the veils. My opinion is that these ritual forms and processes can provide the kind of structure, or floor plan, to assist any multidimensional navigator to marshal their forces towards their deeper integration in the body. At the very least it can provide a critical sense of containment for what may be otherwise uncontainable, and thus prone to dispersion and fragmentation without a form or function to maintain it.

Interview by Scotto



POLARIZATIONS

Like the archeologist's pick-axe, effective ritual can be a tool for penetrating the surface crust of our social conditioning in order to mine the vital veins embedded deep within our shared human condition. To quicken this archeology of the soul, participants create what I call a "dirt list": a list of charged polarities. These are comprised of opposites reflecting strong personal resistances and/or excitements. Both negatively and positively charged polarities energize and drive the ritual warm-up through a process called POLARIZATIONS. During POLARIZATIONS, one invariably encounters multitudes of ideas, pictures and other "socially-accepted" ideals of what that experience "should be or look like." For example, there are scores of images in society constituting the ideal Feminine and Masculine. Sometimes, all we can do is live through these musty, dusty ideations before being touched and moved in the concept-free zones of intuitive contact with their underlying sources.

Sometimes, during polarizations, nothing happens or one is afraid of acting inauthentically; self-consciousness sets in. If you find yourself snagged on these superficial socially-approved icons, it may be best to accept them and — if your vanity can bear it — make a fool of yourself. Act them out and bring their expression to their most exaggerated, distorted extremes. Sometimes we have to exfoliate and regurgitate our social conditioning just to get it out of our systems long enough to really look at it. As these layers of cultural bias peel away, we eventually grow closer to the heat and the light of our core responses and feelings. Alchemically, the body becomes a vessel for containing, mixing, transforming and refining the impressions of essences you learn to experience more directly within yourself. With enough practice, a kind of kinetic mysticism evolves. As these apparent contraries dissolve, the unity of life avails itself.

Antero Alli is artistic director of ParaTheatrical ReSearch, a core group of performers, ritualists, musicians, mediamakers and actors that stage intermedia performance works, as well as non-performance oriented ritual experiments. He can be contacted via www.paratheatrical.com.



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Alchemy and a Little Anarchy with Dale Pendell

Interview by Malvolio Ruttelege

*Author, poet, computer programmer and alchemist, Dale Pendell wrote the popular and unorthodox **Pharmako/poeia** (1995), a compendium of drug and herbal history and lore based around ideas from the alchemical tradition. TRP spoke with Dale on a sunny day at his home in the Oakland hills.*

TRP: Why did you get involved in alchemy?

DP: Well, one of the things I'm trying to do is trace Gnostic wisdom tradition and higher spirituality through the western tradition. A lot of my practice and background has been through Buddhism, and more the vision quest, shamanistic religion, but I wanted to find a system of ideas and to ground it in the western tradition also going through Alexandria. A lot of those things came together to formulate the alchemical ideas. It's this hazy ground, this ground between science and magic...

A relation, near kin.

Yeah. From the time when natural philosophy included physics, that's what there was to physics. And the books were written in verse. So I've always had kind of a foot in both camps. I was trained in chemistry and physics and by doing my creative work in the arts. So alchemy seemed like the most fruitful way to straddle this chasm.

What do you think the future of alchemy is, and is it still relevant today?

First off, I'm not really an expert in alchemy. There is an alchemical tradition that is alive mostly in occult circles. Some of it came through a man called Frater Albertus, who had the Paracelsus Research Society in Salt Lake City. And the Spigaric herbal tradition, where they use alchemical ideas. They do some laboratory work. There's a note in the note section in *Pharmako/poeia* where I kind of dismissed that, and I was taken to task for it. Some people contacted me and said, "Hey we're still working in the lab!" There is an alchemical praxis. My interest is more as a methodology, a theoretical scheme. On the one hand you look at the Negritto process: the "prima materia" has to do with dissolving. The first step might be to forget everything you know about chemistry and atoms and molecules and look at the world as substance and quality. There's a wonderful outlining of that process in painting, how painters look at their colors. And that gives you a different way of experiencing the world — a more poetic way. So it's a poetic praxis also.

But then I think a further step beyond that is to meld chemistry, science, the scientific tradition, back into it. Which leaves one in a very uncomfortable, meta-stable state. Because they don't all go together. So who are the real alchemists at this point? We can see it in the arts in particular. That's one thrust. The other thrust was started by Jung, where he saw it as a metaphor: the psychological process of differentiation and integration and transformation. Transformation is a kind of basic trope. And then we have psychedelic chemistry, the work that Sasha Shulgin does. That's alchemical. He has this structural sense of molecules and their shapes and different qualities and can intuitively make jumps as to say, what if we replaced this hydroxyl group with a methyl group over here...

Have you been interested in alchemy your whole life?

Yes.

Was use of entheogens a factor?

No. Long before that. Very early I read Jung's books, and the drawings in them, of course, are so magical. It pulled so many things together — work with metals, work with smith craft. I did a lot of work with precious metals. My first book was called *The Gold Dust Wilderness* and comes out of a Placer claim that I had in the Trinity Alps. And prospecting and geology led into assaying, which led to laboratory work with metals. So that flowed right into it. Working with crucibles...

Did you ever make any money gold prospecting?

I got a good book out of it.

Do you feel there's an alchemical aspect to computation now? Number theory?

We're stretching the metaphor here. I like that... An alchemical aspect to computers or number theory? Certainly there's more of a tradition to number theory which goes back to the Pythagoreans. Since computers have returned to digital work, to the discrete mathematics rather than continuous, there's some connection that way, to the Pythagorean approach. As is also



true in contemporary physics, which has returned to the Pythagorean.

Contemporary physics has returned to number mysticism?

Numbers have become primary, small numbers. The different quantum numbers, charge, spin, these quantized states, which means they're discrete, their familial relationships, their symmetry groups are the core. That's what the theory comes out of. The theory at this point is more real in a sense than physical models. There are many physical interpretations saying, what does this "mean"? The core interpretation is that all the meanings are kinds of glosses and the core meaning is just the mathematical relationships themselves.

The relationships themselves? So it ties into alchemy?

Yeah, if we go to chromodynamics — wonderfully named, because of quarks and gluons exchanging "colors" — these are not physical colors, but Pythagorean colors. Those transformations are the core of the unified field theory.

What's the difference between alchemy and transformation?

Maybe alchemy is the art of transformation and the familial relationships. There are two main threads in natural philosophy. One is empirical, which would lead through taxonomy, collecting information, working from experiment. The other is this Pythagorean mode. And there are debates about the relative merits of the two approaches. Some have argued that Pythagoreanism held us back. Some say that the reason the Chinese excelled and were ahead of the west in every science excepting physics was because they didn't have a Pythagoras, they didn't have this number mysticism. What is the status of a number? It's not a physical thing and yet there are these relationships between them that seem immutable. They exist on some eternal and pure plain. And certainly that flowed directly into Plato and his ideal and eternal forms. It's all through western theology. There have been cycles through western history where one or the other of these traditions has been at the forefront.

Loosely related to that, the idea of a hidden dimension where numbers are and possibly other things....

Yeah, the question is: are mathematical theorems discovered or invented?

Yes. Now you wrote in *Pharmako/poeia* a chapter about the "seduction of angels". Do you think that those entities exist where the numbers are? It seems hard to say if they objectively exist or if they're subjectively created.

Angels? Well, it's important to recognize them when they appear... My whole project is to subvert the way we think, the way we look at the world, and my two targets are, on the one hand scientism which has a reductionist/materialist approach and would "dis" this whole discussion, and on the other hand, the naively uncritical new age thought that is dismissive of the scientific tradition. My whole program in the weird way that *Pharmako/poeia* looks, this illegitimate mixture of science and magic, is kind of a

wager that poetic logic is a truer description, a more complete description of the world than a purely scientific description. But at the same time, the scientific tradition has to be incorporated into it. Trying to pull these two currents in the western tradition back into each other. I think the culture needs that. It's kind of a disease we have.

It seems that on a certain level, they're indistinguishable after a certain point, as far as physics is going.

Perhaps. Certainly there's a lot of pop books on "quantum" this and that. The word "quantum" is very big. But even David Bohm's quantum theory, which can account for everything that the standard theory does, incorporates this extra quantum operator, which is not really defined but is present in the equations. There is still separation between subject and object. The self is not really a part of it. In mystical tradition the self is intimately involved in all of it. So I don't know if I would go that far.

But isn't that what quantum physics is about? The idea that you cannot calculate something without taking the position of the calculator into account?

Yes. Heisenberg's Principle has that application. Though again it was originally and primarily a theoretical construct which clearly had this physical analog in terms of measurement. But yes, the observer has become extremely important. Even to the point where the logical positivists would say if you can't measure it, it has no validity, no reality... I follow Eddington's ideas. Eddington, I think in 1927, the same year that Heisenberg published the Uncertainty Principle, had these wonderful lectures outlining the limits of what physics can do. And it was clear to him that starting with volition, there was this whole area, a non-quantifiable substrate — I think he called it the "world stuff" — that physics can never touch. It's a whole different plane. So he saw what physics can touch and describes as, I would say, a sub-dimension of what is.

So where does solipsism come into that?

Is that what we call deconstruction? You get that in some strands of mystical traditions, in certain aspects of Mahayana philosophy, called Yogakara, the mind-only, that mind is the prime reality.

Do you feel that's true? Your mind is the prime reality?

That's small mind. Saying my mind or your mind is small mind. What we usually think of as mind is small mind. If we could speak of such a thing as the "great reality" or something, it would have to be some kind of mind that includes that bird singing.

It's really hard to cognize that concept.

Quite so. That's why the Zen tradition says you have to cut the mind road off. Their whole practice is to bring the reasoning process to a dead end, and kind of tie it off in a knot, through koan practice. So that there is a deeper mental process, not a reasoning process, more of a merging process, expanding intimacy to encompass all of it.

But reason is the fountainhead of our society. Or at least the pretense of it.

Yes. I don't see that much of it myself. I like that we give reason some lip-service. I think we ought to try it more often! I don't know, I think reasoning usually comes after we decide what we're going to do and then we think up reasons to try to explain why we're doing it.

Do you think rationalism has led us like lemmings off the hill?

Yes, which puts Pythagoreanism in this weird state. Because it is certainly rationalism. Though the rationalist tradition in the west came through Aquinas I think.

But this house could not have been made without rationalism. Rational measurements.

Now wait a minute. There are different ways to build. People all through history have used mind and ingenuity and cleverness and reasoning to build things. That's different from rationalism, which is giving the logos, giving word and definition and logic between symbols, symbolic logic, a primacy, and saying only things that come out of this logical system are true. I think that's clearly in error. That's one of the diseases that I would like to poison. The best poisons are mind poisons and logic poisons. I love something that Vico said once: poetic truth is metaphysical truth and actual facts not in conformance with it should be considered false. Now there's a little drop of brain poison. Just kind of hold that in your mind and it starts dissolving everything you can think to be true or reasonable.

But I'm not against reason or investigation or science. I think it's very important. We need better analysis. The error I think is mixing up symbols and words for what is. It's a perspective, a tendency to say, oh, because these things work, because they have such dramatic effects, like we can make hydrogen bombs, that is the path to ultimate truth, or to higher truth, that it explains everything. That other things are nothing but metaphor, or nothing but superstition. That term comes from Gurdjieff. The "nothing-butism" that is the problem. A reductionism that really is against the scientific dream, of clearing oneself of preconceptions. To find what is. Science creates its own preconceptions and all the theoretical constructs have great resistance to things that don't fit inside of them. I think the history of medicine is a real good place to find some of that perspective. Because you don't have to go back very far to come to medical practices that already to us seem barbarous. The theory of germs....

What is your opinion of causality then? Do you think it's fraudulent, do you think that it's an illusion? That seems to be the fundamental question here.

Well, volition comes into that, and the philosophical question of free will, biggest in the sciences. Most of that action now is happening in biology. Molecular biology, neural biology. The shift

now is into genetics. DNA has moved into this position of the logos. It's the code and all things are determined by the code. What this logo-centrism neglects or negates is environment. The environment is also a great carrier of information. DNA does not have all the information that it needs, a whole world and culture.

But I don't think most geneticists would say that environment doesn't play a part.

Well, it's on the downside right now, and Francis Crick has wondered if he has found the seat of the soul in some material part of the brain. The image of man or mind as a super computer — a super machine. In literary theory, Donna Haraway is talking about the cyborg as her hope for a new image or metaphor that will solve some problems. I'm kind of skeptical that way, I'm more inclined to look to old ways, the older traditions, natural societies, more anarchistically based cultures and looking back to pre-civilized models of society, less hierarchical things. We could say

that civilization has come to mean an advanced developed state, but traditional societies were just as intricate and advanced in their way. Another way to look at civilization is that it's an anomalous condition that humans have been in for the last four thousand years, which does not

represent most of our lives — that of having a centralized state, of having standing armies, hierarchical social structures.

That seems more like the "noble savage" myth. It seems to me that there has never been a time in human history when there hasn't been some form of hierarchical social structure.

Of course, but there's a difference between when it's instituted and so there are structures that have their own force. I'm not too concerned with the so-called or presumed violence in human nature, if there is such a thing; that's something we can deal with and we've learned to deal with it. But it's institutionalized violence that brings it on a scale. It's a matter of scale. There's no comparison between skirmishes, where the young men go out and have skirmishes with the next tribe and you dodge arrows, then you stop when somebody gets hurt, to the genocide that comes out of nation states: Institutionalized, mechanized.

That's why we need the alchemical process of the cycle of returning to the Saturn phase, the Negritto phase, and again dissolving those boundaries. We need boundaries. We create them all the time. We use them all the time and they are joyful. It's a wonderful thing, all the particularities and how they dance. But it's a flow. I think the problems are when it freezes into ice cubes and they glom together... it's a process. And that's the alchemical circulation in the alembic, a continuing dissolving, re-distilling. You get it out and then you bring it back. It's like the dialectical process.

What do you think the future is going to look like as far as human societies go?

Hard times for large mammals.

We need boundaries. We create them all the time. We use them all the time and they are joyful. It's a wonderful thing, all the particularities and how they dance.



70 Common

by Fire Erowid

Good information about illegal drugs is hard to come by. There are a lot of unanswered questions and few people who are knowledgeable, qualified, and willing to answer them. Patients are scared to talk to their doctors about drugs and doctors are afraid of malpractice suits if they recommend anything but abstinence. Drug education consists primarily of "Just Say No" messages and horror stories about the dangers of evil drugs. While the Internet has provided a platform well suited to the distribution of accurate drug information, its development has also led to the propagation of drug myths.

Drug myths abound. Following are a selection of 70 drug myths, many well-known, some absurd, others obscure. We've tried to assemble in one place a collection of brief answers to these common myths and misconceptions. References follow in the notes section.

DRUG LAW / POLICY

1. Drug use is declining: We're winning the Drug War.

Government and media reports often use statistics to show that drug use has declined, yet illicit drug use amongst 12th graders has increased by 33% in only 6 years.¹

2. Drug use is on the rise: We need more funding for the Drug War.

Government and media reports often use statistics to show that drug use is worse than ever, yet lifetime use of illicit drugs amongst 12th graders has declined 27% since 1981.²

3. Statistics are used to prove the truth.

Statistics can be used to support many things. There are a variety of ways to talk about trends in drug use over time. The three primary

studies used are DAWN (Drug Abuse Warning Network), which tracks drug mentions in emergency room visits, the Monitoring the Future Study which surveys 8 -12th graders each year, and the National Household Survey on Drug Abuse conducted by SAMHSA (Substance Abuse and Mental Health Services Administration). Using statistics from these organizations we can say both Myth #1 and Myth #2 are true, even though they obviously suggest completely opposite ideas. Illicit drug use moves in cycles; there will be ups and downs in the natural course of things. Realistically, current drug use among 12th graders is very similar to what it was in 1975. It went through a higher period in the late 70s and early 80s and a lower period in the late 80s and early 90s. There is every reason to believe these trends will continue to cycle over time. Be careful when reading statistics (even ours)... the more information you have about the source of the data the better.

4. Law enforcement is the most effective drug control technique.

A recent study by the Rand Corporation looked at "The Benefits and Costs of Drug Use Prevention." Looking specifically at cocaine use,



Drug Myths

<http://www.erowid.org>

they found that \$34 million in treatment funding would reduce cocaine use by 1 percent, while \$250 million of domestic law enforcement would be required to make a similar 1 percent reduction. If we wanted to make a 1 percent reduction through source-country control (coca leaf eradication and seizures of products in the source countries), we would need to spend nearly \$800 million.⁴

5. Increased law enforcement decreases drug use.

In 1973, the total amount spent to enforce the drug laws of the United States was less than \$100 million. Over the next 20 years it increased steadily until in 1994 it was over \$12 billion. That's a 120 times increase in 20 years. During that same time, self-reported illicit drug use amongst 12th graders has stayed about the same while the Drug Abuse Warning Network showed an increase of around 50% in emergency room drug mentions. If increasing spending for law enforcement were a functional theory for decreasing drug use, one would hope that a 120 times increase in spending would show at least *some* concrete decrease in drug use.⁵

6. Drug arrests do not account for much of the current prison population.

Between 1850 and the late 1970s, the U.S. incarceration rate remained relatively stable at about 100 inmates per 100,000 people. Since the late 1970s, the rate has skyrocketed to 600 per 100,000. State and local drug arrests rose from 58,000 in 1980 (remember that was nearly the height of self-reported drug use by 12th graders) to 1,580,000 in 1997. That's an increase of 2700%, while during that time the population increased by only 20%.

7. Prohibition works.

The use of mind-altering inebriants is as old as recorded history and is unlikely to go away anytime soon. Marginalizing psychoactive drug users simply reduces the normal social pressures towards responsible behavior and creates rebellious subcultures. The prohibition of alcohol created a huge black market which resulted in violent and powerful Mafia control of the alcohol trade. Drug prohibition has created extremely powerful, armed gangs and drug cartels in control of the drug trade.

8. "Just Say No" is an effective campaign.

The harms done by the "Just Say No" campaign are painfully obvious. While perhaps effective on very young children (who are at low risk for drug use as it is), as soon as children start questioning this overly simplistic theory, it becomes ineffective. By asking "What if I *don't* just say no?" a child is already beyond the scope of the program. A realistic drug education program needs to be honest with children, teaching them about the real risks of specific substances so they can practice responsible behavior whether or not they choose to use psychoactives. Campaigns based on "Just Say No" have not been shown to be effective.

9. DARE is an effective program.

There has been considerable controversy surrounding the effectiveness of the government funded Drug Abuse Resistance Education program (DARE). While many argue that intercepting children at a young age and teaching them that drugs are wrong is the way to go, a California study of 5,000 students found that the Los Angeles-based DARE program was ineffective in reducing drug use among school children. Likewise, a federally funded Research Triangle Institute study found that except for tobacco use, the DARE program was no more effective than whatever drug education (if any) was offered in the non-DARE control schools. And a six-year study of 1,798 students found that DARE had no long-term effects on a wide range of drug use measures and there is some evidence that those students who were DARE graduates may have gone on to more drug use than those in the control groups.⁹

10. There are no legitimate uses of illicit psychedelics. That's why they're illegal.

There are many therapeutic uses of psychedelics such as MDMA and LSD, which have been pushed underground by the current drug laws. Psychedelic therapy (MDMA & LSD), addiction treatment (ibogaine & GHB), spiritual use (peyote & mushrooms), the medical uses of marijuana, and research into the workings of the mind are only a few of the possible uses of these substances.

11. Drug use costs society more than drug laws and enforcement.

A number of studies have attempted to estimate the total "societal cost" of alcohol and drug abuse. These studies are often cited in media reports and political discussions of how much damage "drugs" do. The calculated costs are used to show that more spending on "drug prevention", police, and prisons makes economic sense. But by examining the calculations used when determining these "costs" it becomes obvious how ridiculous they are. Included in the costs of drug abuse are such things as forgone earnings for those drug users who are in jail, productivity losses due to people who have died prematurely, lost "legitimate earnings" of drug dealers, and the costs of prosecuting all of those charged with drug related crimes. All costs paid privately by the substance user (lawyer fees, wages for lost days of work, etc.) are included in these estimates.¹⁰

12. Drug use is higher in the Netherlands than in the USA.

A study conducted earlier this year by Amsterdam University and the Dutch Central Bureau of Statistics found that 15.6% of Dutch people aged 12 and over had tried cannabis, compared to a U.S. figure of 32%, and that the number of people who had used cannabis in the past month was also more than twice as high in the U.S.

Similarly, cocaine and heroin use in the U.S. is three times higher (based on percentage of population) than in the Netherlands.¹²

13. Tolerance of soft drugs leads to an increase in hard drug use.

There is an argument that if a society tolerates the use of soft drugs such as cannabis, the use of both soft drugs and harder, more addictive drugs such as heroin and cocaine will increase. The Netherlands is a good example of a western nation with a policy of soft drug tolerance. As the numbers above show, their tolerance has caused neither a higher rate of soft drug use, nor an increase in the use of harder drugs compared to the U.S. with its policy of strict intolerance.

14. Politicians have informed opinions about drug laws.

The politicians who introduce and vote on bills know very little about the realities of different types of drug use. Their opinions are often based on knowledge provided by prohibitionist special interest groups and one-sided media reports. Because the issue is framed in terms of "drug abuse" and the "drug war", they are unlikely to search out opinions discussing the merits of psychoactives. During hearings for the passage of many of the anti-drug laws, Congress has been unwilling to hear experts testify against their seemingly foregone conclusions. A classic case of this was the first criminalization of cannabis with the Cannabis Tax Act, where Congress turned away testimony against the bill from the American Medical Association. Unfortunately, this leads to an unbalanced view of the issue which allows no room for differentiating between harmful, dangerous drug use and the peaceful, healthy, and possibly spiritual use of psychoactives.¹⁴

15. The Drug Czar is knowledgeable about drugs.

Barry McCaffrey is a military man, not a trained medical professional or social worker, who has worked to bring military justice into the realm of social policy. He appears to be primarily a figurehead for the "drug war" with little practical knowledge about the more complex issues of drug use. His knowledge of psychedelics seems non-existent and several serious mistakes in citing facts about Swiss and Dutch drug policy experiments last year showed that his familiarity with international policy issues is limited.¹⁵

16. Recreational drug use can be ended.

There are a wide variety of substances that people can and do use to achieve a high. For example, inhalants are not illegal and are easily available in most homes and from hardware or home supply stores. They are not going to go away and they are more harmful than almost all of the illegal drugs. By working to reduce non-medical use to zero, we are simply pushing kids towards significantly more

harmful substances. The long recorded history of the use of psychoactives by humans shows that there has never been and there will never be a drug-free world.

DRUGS (GENERAL)

17. All illegal drugs are alike, equally harmful, equally bad.

The term "drugs" is frequently used to refer to any illegal, psychoactive substance (i.e. "and then he got into drugs"). This is an almost useless breakdown. There is huge variation in effects and risks from heroin to cocaine to hallucinogens. One of the greatest problems of the drug war is that these distinctions are lost, making policies and discussions meaningless. To talk about psychoactives in a useful way requires detailed information about each specific substance, methods of use, and those who use them.

18. There is no such thing as responsible use of illicit drugs.

Because there is little differentiation made between the different types of illicit drugs, it is perhaps easier to think of anyone who uses a scheduled substance recreationally as a stereotyped, hapless, self-gratifying junkie rather than considering the millions of individuals who use illicit drugs responsibly. While the use of some substances can lead to addiction, the majority of recreational users are not slaves to addiction. A recent study by the Substance Abuse and Mental Health Services Administration (SAMHSA) found that 7 of 10 illicit drug users are employed full-time.¹⁸

19. Drugs aren't fun.

Probably only effective against very young children, this myth is propagated by many of the online prohibition sites who fail to mention any of the positive effects of drugs, from pleasurable feelings to spiritual and therapeutic uses. Many people continue to use recreational psychoactives because they enjoy the effects or find that their lives are better with responsible use of a substance than without. While various substances can be very hard work, very useful, and very unpleasant, to suggest that they cannot also be fun is ludicrous.

20. Any use is abuse.

Throughout history there have been many peoples who have, as a society, used psychoactive drugs. Families and religions have gathered around the use of peyote in North America, psychoactive mushrooms in Mexico and Siberia, DMT and harmaline in the Amazon, ibogaine in Africa, kava in the Pacific Islands, cannabis in India & the Middle East, tobacco in the Americas, coca in Peru, and many more. In these cultures, use of psychoactives was and is part of normal life, not considered criminal or deviant or abnormal, but often a path to a fuller connection with life. Responsible, acceptable, beneficial use *is possible* within a society.

The harms done by the "Just Say No" campaign are painfully obvious. By asking "What if I don't just say no?" a child is already beyond the scope of the program.

21. "Spiritual use" of psychoactives is just a front for those wanting to legalize drugs.

There is a great deal of evidence to suggest that mystical experiences can be facilitated with the careful use of psychoactives. Hundreds of books have been written addressing the topic from all angles.²¹

22. Drug use is immoral / wrong.

Barry McCaffrey said in a national television interview that even drinking a glass of alcohol to experience the relaxing effects was "morally wrong." The predominant view in the US and parts of Europe against any enjoyment from ingesting plants seems to come from a long history of the denial and fear of pleasure, including those found through sex, recreational psychoactives, music, dancing, and other "non-productive" recreational activities. Let's keep religious beliefs out of the laws.

23. Illicit drugs are poor quality.

The quality of street drugs varies widely, depending on the substance. One of the main problems is *determining* quality. While powder or pills can be virtually anything, the quality of cannabis can generally be determined by look and smell. Substances like ketamine, which often come with pharmaceutical company packaging, are quite likely to be pure. Most importantly, pharmaceutical grade, top quality Schedule I substances are available on the black market.

24. Winners don't do drugs.

Kerry Mullis, Nobel Laureate and biochemist, attributes his discoveries to his use of LSD. Sigmund Freud and Thomas Edison both used cocaine, William James used and wrote about nitrous, Pope Leo XIII used and endorsed Vin Mariani (a combination of wine and cocaine) along with William McKinley, Queen Victoria, Jules Verne, Sir Arthur Conan Doyle, and others. Florence Nightingale used opium, Carl Sagan used cannabis, Aldous Huxley used mescaline and LSD, Clinton used cannabis, and George W. Bush used cocaine. Steve Jobs and Steve Wozniak, founders of Apple, both used LSD, and there's every reason to believe that the digital revolution and the development of personal computers was inspired and carried out by a culture of cannabis smokers and psychedelic users.²⁴

Alcohol is by far the most common substance involved in sexual assaults. There will always be drugs, whether prescription sleep aids or black market depressants, which can render a person unconscious.

HEALTH

25. Drugs are dangerous.

Overly simplistic claims like this are meaningless. The risk profile for each drug is unique. Many illicit drugs are very safe while others have specific dangers like addiction, overdose potential, or long term health risks. Cocaine and heroin are among the more dangerous illegal drugs while drugs such as LSD, psilocybin mushrooms, and cannabis are quite safe. Discussions about the dangers of illicit drugs must take into account the specific substance as well as the types and methods of use.

26. Doctors are knowledgeable about illegal drugs.

Unfortunately, the issues around illicit drug use are often hazy. Information is poorly distributed and important issues are misunderstood. Because of the complexity of the issues and the illegal nature of the topic, many doctors will either not provide any information, or will provide information which is so ridiculously overstated in the direction of "safety" that it is useless.

27. Drugs are scheduled based on how dangerous they are.

In reality, psychoactive drugs are scheduled based on how likely they are to be used recreationally rather than how safe or dangerous they are. The most dangerous substances (poisons) are not scheduled at all while psilocybin mushrooms, one of the least dangerous psychoactives, are Schedule I. And no serious researcher believes that cannabis is more harmful than the drugs scheduled under it. Gastro-intestinal complications caused by anti-inflammatory drugs such as aspirin and ibuprofen lead to more than 7,600 deaths annually, while there are less than a handful of deaths directly attributed to the use of LSD, psilocybin, and cannabis combined this century. A more reasonable scheduling system would look something like the proposal recently made to the French government which would classify drugs based on the harm they do. This system would put alcohol, heroin, and cocaine in the top category, tobacco, amphetamines and the psychedelics in the middle, and cannabis in the third, least dangerous group.²⁷

28. It is dangerous to combine drugs.

Again, this is an oversimplification. There are many combinations of drugs which, when used carefully, can be quite safe. Some psychoactive drug combinations

actually make each of the individual substances MORE safe. And, as expected, there are combinations to be avoided.

ALCOHOL

29. Illegal drugs are more dangerous than alcohol.

Alcohol is blamed for over 100,000 deaths each year, about half due to alcohol poisoning or illnesses caused directly by alcohol and the other half due to automobile accidents, suicides and homicides. In comparison, all illicit drugs combined are the direct cause of only 5,000 deaths each year.²⁹

30. Alcohol is legal because it's a part of our tradition while illicit drugs are not.

While there seems to be some truth to this idea, it is also a fairly narrow-minded and euro-centric view. While the use of alcohol is traditional in Northern European culture, cannabis, peyote, khat, kava, and mushrooms are all traditionally used in other cultures, including some in North America. The U.S. is made up of peoples from many places.

CANNABIS

31. Marijuana has no therapeutic value.

There has been huge debate about the legitimacy of the medical uses of marijuana. In 1997, the well respected Institute of Medicine (IOM) was chosen by the federal government to conduct a year-long review of the scientific evidence on the topic. Their report released in 1999 found that "the accumulated data suggest a variety of indications, particularly for pain relief, antiemesis [vomiting], and appetite stimulation. For patients, such as those with AIDS or undergoing chemotherapy, who suffer simultaneously from severe pain, nausea, and appetite loss, cannabinoid drugs might offer broad spectrum relief not found in any other single medication."³¹

32. Medical marijuana supporters are only trying to get recreational use legalized.

People argue that the medical marijuana movement is supported primarily by those who want to get recreational use legalized and see the medical movement as a stepping stone towards that end. But it's important to recognize that those who believe in recreational use are quite likely to believe in the right of individuals to use cannabis medically as well. Just because an individual supports legalization does not make their support of medical use any less legitimate.

33. Marijuana is a "gateway drug."

The recent Institute of Medicine study also reported that "there is no conclusive evidence that the drug effects of

marijuana are causally linked to the subsequent abuse of other illicit drugs." This myth is based on a confusion between cause and correlation. While it's true that most people who use heroin have smoked cannabis, it's also true that most heroin users have drunk alcohol. Just because there's a statistical correlation between two behaviors does not mean one caused the other.³³

34. Cannabis is "toxic."

The 1999 Institute of Medicine report found that "marijuana is not a completely benign substance. It is a powerful drug with a variety of effects. However, except for the harms associated with smoking, the adverse effects of marijuana use are within the range of effects tolerated for other medications." Likewise, the British UK Lords Report found that "the acute toxicity of cannabis and the cannabinoids is very low; no-one has ever died as a direct and immediate consequence of recreational or medical use. Official statistics record two deaths involving cannabis (and no other drug) in 1993, two in 1994 and one in 1995; but these were due to inhalation of vomit. Animal studies have shown a very large separation (by a factor of more than 10,000) between pharmacologically effective and lethal doses."³⁴

35. Cannabis causes sterility.

A recent report by the U.K. House of Lords found that "animal experiments have shown that cannabinoids cause alterations in both male and female sexual hormones; but there is no evidence that cannabis adversely affects human fertility, or that it causes chromosomal or genetic damage (WHO report Ch.7)."³⁵

36. Cannabis causes birth defects.

The NHS National Teratology [i.e. fetal abnormality] Information Service states, "There are a few case reports of malformations following marijuana use in pregnancy. However, there is no conclusive evidence to suggest either an increase in the overall malformation rate or any specific pattern of malformations." There is some reason to believe that heavy smoking, whether of marijuana or tobacco, may lead to shorter gestation and lower birth-weight babies due to the inhalation of carbon monoxide in the smoke, which lowers the ability of the blood to carry oxygen to the fetus.³⁶

37. Cannabis causes a motivational syndrome.

The UK House of Lords report also stated that "the occurrence of an 'a-motivational syndrome' in long-term heavy cannabis users, with loss of energy and the will to work, has been postulated. However it is now generally discounted (van Amsterdam Q 503); it is thought to represent nothing more than ongoing intoxication in frequent users of the drug (RCPsych p 283)."³⁷

There's every reason to believe that the digital revolution and the development of personal computers was inspired and carried out by a culture of cannabis smokers and psychedelic users.

38. Over time, cannabis causes brain damage.

A Johns Hopkins University study of 1,300 individuals administered a basic mental functioning test to adult cannabis smokers and non-smokers on two occasions spaced eleven years apart. They found that "over long time periods, in persons under age 65 years, cognitive decline occurs in all age groups. This decline is closely associated with aging and educational level but does not appear to be associated with cannabis use."³⁸

39. Cannabis permanently damages short-term memory.

During marijuana intoxication, thought processes change and some people find it difficult to track specific thoughts. Studies show that during marijuana intoxication, the ability to store and then recall words, images and sounds is diminished. However, this effect is generally limited to the duration of the effects of cannabis. There are dozens of studies that look at possible cognitive and memory impairment in cannabis users, and they have widely varying results. Generally there seem to be minor differences found in both short-term memory and complex cognitive functions of long term cannabis users when compared to non-users, and many argue that the studies are poorly controlled and inconsistent in their findings. The recent UK House of Lords Report found that "there is some evidence that some impairment in complex cognitive function may persist even after cannabis use is discontinued, but such residual deficits if present are small, and their presence controversial."³⁹

40. Marijuana slows down brain activity.

Even the American Medical Association is willing to repeat this one. This is probably based on a 1985 study which found that long-term cannabis users completed one test slower than non-users. However, when the subjects were asked to retake the test and answer as quickly as possible, no differences were found.⁴⁰

41. Marijuana is "X" times more potent than it was in the '60s and '70s.

Nonsense. Realistically it seems that cannabis has seen a slight increase in potency between 1970 and the present. The myth that it has increased by anywhere from 10% to 500% seems based primarily on poorly collected data, inconsistent testing methods in the 1970s, and a desire to convince ex-pot smokers and parents that somehow

Alcohol is recognized by most medical associations as far worse for developing fetuses than crack or powder cocaine.

NIDA has called the crack baby scare a "gross exaggeration."

marijuana has changed dramatically from the mostly harmless intoxicant they knew when they were young. Most of the early testing was done on shipments seized by the DEA, 90% of which were imported (primarily from Mexico) and only seizures over 200 pounds were tested. Obviously, large truckloads of Mexican brown leaves are going to be lower quality and less potent than the indoor grown California bud that wasn't included in the testing. Additionally, it has been suggested that poor storage of seized cannabis may have caused degradation of the active ingredients before testing. Tests from the 1970s showed cannabis potencies ranging from 2-10% while good quality marijuana buds in the 90s range from 5-15%. While the availability of top-grade cannabis has certainly increased some over the past 20 years, comparing grade for grade it seems that marijuana potency has only increased by a small amount if at all.⁴¹

42. Sinsemilla is a new technique which has caused increased potency.

The process of separating males from females early in their development to produce seedless buds is hundreds of years old. This technique, which produces somewhat more potent buds, was even written of in a letter by George Washington.⁴²

43. The smoke from one joint causes more lung damage than a whole pack of cigarettes.

Both NIDA (National Institute on Drug Abuse), the federal government's primary drug-oriented medical research branch, and the recent UK Lords report on cannabis conclude that smoking one joint delivers 3-5 times the tar and carbon monoxide of a cigarette. See below for a fuller discussion of cannabis vs. tobacco smoking.⁴³

44. Cannabis is more dangerous than tobacco.

The main argument against this rumor is in the quantities of marijuana smoked by the average user compared to the quantities of tobacco smoked by the average cigarette smoker. While the average cigarette smoker smokes about 1 pack a day, the average cannabis smoker doesn't even smoke daily, but intakes an average of about 1/3 of a joint a day. Let's round that number up to a full joint a day just to be sure.

As stated above, NIDA reports that smoking a joint delivers 3-5 times the tar and carbon monoxide of a cigarette, while the Institute of Medicine states that they are approximately equal. Even if we go with the highest of the NIDA numbers

and assume 5 times more tar and carbon monoxide exposure from a joint than a cigarette, when we multiply 1 joint a day by 5 times the tar and carbon monoxide we get the equivalent of 5 cigarettes a day. The average cigarette smoker smokes 20 cigarettes a day.

Then consider that cancer risk is related closely to lifetime exposure of inhaled smoke. Over time 90% of cannabis smokers reduce their intake or quit, while 30-50% of those who have ever smoked cigarettes are still smokers today. Cigarette smoking is clearly more dangerous.⁴⁴

45. Not very many cannabis users are arrested.

In 1997 there were over 695,000 federal, state and local arrests made for cannabis possession and sales. 87% of those were for simple possession and 13% were for sales/manufacture.⁴⁵

COCA

46. Crack babies are permanently damaged.

There is significant controversy over the effects that the use of crack or cocaine has on undeveloped fetuses. While it is commonly reported that "crack babies" are underweight, agitated, and cry a lot, more recent studies have shown that the primary causes of the "crack babies" health problems were poor nutrition and poor prenatal care. Alcohol is recognized by most medical associations as far worse for developing fetuses than crack or powder cocaine. NIDA has called the crack baby scare a "gross exaggeration."⁴⁶

47. Cocaine has no medical uses.

Cocaine is primarily used as a local and topical anesthetic in cases of oral and nasal surgery. It has also been used to treat digestive and respiratory ailments, and as an adjunct to other anesthetics in ophthalmological surgery.⁴⁷

48. Cocaine is more addictive than cigarettes.

The 1998 National Household Survey on Drug Abuse found that of the 10.6% of the population who reported ever having used cocaine, only .8% had used it within the past month, while of the 70% of the population who reported ever having used cigarettes, 28% had smoked within the past month.⁴⁸

49. Crack is far more dangerous than powdered cocaine.

Despite the fact that federal sentencing guidelines are 10 times stricter for crack than for powdered cocaine, many people don't realize that crack and powdered cocaine are simply two different forms of the same substance. The effects of a substance are generally stronger if injected or smoked than if snorted or taken orally. Because it is smoked, crack (freebase cocaine) requires less material for the same high, so it is cheaper. Poorer individuals are more likely to use crack while richer individuals are more likely to pay the extra cost for the powdered cocaine. There

has been a strong push to redefine the sentencing guidelines for crack and cocaine so they are equal, calling the current system racist and classist.

GHB

50. GHB is a "date rape drug."

Alcohol is by far the most common substance involved in sexual assaults. However, any substance which impairs the ability of people to adequately respond to a situation or defend themselves if the need arises could be used in the same way. There will always be drugs, whether prescription sleep aids or black market depressants, which can render a person unconscious. The DEA is aware of 13 sexual assault cases involving 22 victims where the victims were under the influence of GHB.⁵⁰

51. GHB alone (without alcohol) isn't dangerous.

High enough doses of GHB, even without alcohol, can lead to vomiting, convulsions, and short-term coma. It is, however, more likely that these will occur if GHB is combined with alcohol. The combination of vomiting and coma can be a deadly one.

52. Many people die from GHB use.

The DEA reports, "Between 1995 and March, 1999 medical examiners have reported 32 fatalities in which GHB was detected in the decedent. Many of these deaths involved the use of GHB in combination with alcohol, which potentiates the depressant effect of GHB. Of these 32 cases, GHB was found to be the sole cause of death in eight cases."⁵¹

53. GHB is not addictive.

As with many substances, some people have problems regulating their own use (habituation) and some experience physical withdrawal symptoms (addiction) after periods of heavy GHB use. The levels seem similar to the habituation and addiction that occur with heavy alcohol use.⁵²

54. GHB is tasteless.

GHB is definitely not tasteless. It generally has a very strong taste like salty baking soda. Most people consider it quite unpleasant. Since GHB has become restricted in many states, GBL and 1,4-Butanediol have quickly replaced GHB for many people. Both of these have even stronger chemical tastes than GHB.

HEROIN

55. All heroin users are junkies.

"One stereotype of a heroin user, often reinforced by the media, is a desperate, deceitful person, at the mercy of an evil substance that turns into a criminal who holds up 7-11 stores with AIDS contaminated syringes. The

The 'visible' heroin users are often from disadvantaged backgrounds, such as homeless young people. The 'invisible' heroin users may have few problems and maintain otherwise normal lives.

'visible' heroin users are often from disadvantaged backgrounds, such as homeless young people. The 'invisible' heroin users may have few problems and maintain otherwise normal lives."⁵⁵

56. Needle exchange programs cause more harm than good.

There have been hundreds of studies of needle exchange programs summarized in a series of eight federally funded reports beginning in 1991. All of these reports have concluded that needle exchange programs reduce the number of new HIV infections and do not lead to increased drug use among intravenous drug users or the general community. Despite recommendations by such groups as the President's Advisory Council on AIDS, the British Medical Journal, The Lancet, and the Journal of the American Medical Association, there is currently a federal ban on needle exchange programs. It seems clear that it is this ban which is currently causing the most harm.

LSD

57. Blue Star Tattoo

This is one of the classics, based around the idea that evil drug fiends, in order to get children hooked, are handing out lick and stick tattoos that contain LSD. The theory goes that by giving them their first taste of LSD, the child will become hooked and the dealer will have a new customer.

This story has been propagated through physical fliers distributed to police and community groups as well as more recently on the web. It has very little basis in fact. When contacted, the sources cited on the fliers have no knowledge of the purported problem, and, more importantly, LSD is a non-addictive drug, so getting children "hooked" is impossible.

It seems clear that this story began as a misunderstanding or misrepresentation of blotter paper, the most common form of LSD which is generally printed with colorful images, sometimes including cartoons. But of course, cartoons aren't only for children.⁵⁷

58. Cartoons are used on LSD blotter to attract children.

No, they're designed to attract trippers.

There are no federal requirements about drug testing procedures for non-government employees, and employers often use inexpensive, inaccurate testing companies.

59. Strychnine in LSD

This rumor is spread with abandon, explained variously as "strychnine is a by-product of the LSD production process" or "strychnine is used to bind the LSD to the blotter paper" or "LSD is cut with strychnine." Again, there's little basis in truth for this one. The main argument against this rumor is that active levels of strychnine wouldn't fit on a piece of blotter paper. There seem to be a couple of mentions of strychnine associated with LSD in the professional literature. One screening test in 1971 showed a trace amount of strychnine in a sample of LSD, but was never verified. Then, in *LSD: My Problem Child*, Hofmann describes one 1970 case where strychnine powder was sold as LSD, but no LSD was actually involved.⁵⁹

60. LSD causes chromosome damage.

In 1967, a report was released by Dr. Maimon Cohen, which announced that LSD caused chromosome damage. This report was based on a study of a single patient and an experiment in which LSD was added to a test tube containing human cells and chromosome breakage was observed. Since this initial report, the idea of chromosome damage has been widely debunked. Apparently the original test subject, who had been treated with LSD 4 times over several years, had also been treated with regular doses of Librium and Thorazine, now known to cause chromosome damage. And as far as the test tube was concerned? Supposedly adding milk directly to human cells will also break chromosomes.

61. After "X" times of doing LSD a person is legally/clinically insane.

There are no laws or statutes in the United States which specify a number of LSD experiences one can have before being considered "insane." We've heard that this may be based on a single case in the 70s in which the prosecution tried to discredit a witness by citing his LSD use. But it is certainly not law nor even standard practice.

62. LSD causes flashbacks.

"Flashbacks" are an unusually intense recall of a memory. They are very similar in nature to Post Traumatic Stress Disorder, which is most frequently mentioned in relation to childhood trauma or soldiers coming back from war. Generally both the initial experience and the trigger

experience are stressful and intense. Psychedelics are not unique in their ability to produce intense experiences which can trigger latent memories. Another definition of flashback is having a strange shift in perception (seeing visuals, etc). Transitory visual distortions are uncommon, but not extremely rare, and occur in non-users as well. It is speculated that those who are experienced with psychedelics recognize these states and associate them primarily with their drug use. But as far as we know, serious comparative studies have not been done to look at the frequency of these types of perception shifts in LSD users as compared to non-drug using populations.

63. LSD can be made from Foster's Beer.

No, LSD can not be made from Foster's beer. The rumor is that Foster's beer contains ergot, which is related to LSD, and that through an extraction process it can be converted to LSD. There are **very** respectable looking sites that propagate this story along with recipes and directions. The Foster's beer to LSD myth is almost certainly the result of something called "trolling" on Usenet in the mid '90s. Someone posted an absurd weird piece of humor intentionally to try to fool uneducated teens. Ergot is poisonous. If there were ergot in Foster's beer, Foster's beer would be poisonous as well. Totally false.

MDMA

64. MDMA drains spinal fluid.

This rumor is based on a research study which consisted of doing spinal taps on MDMA users in order to test the levels of 5-HT metabolites. This information was either misunderstood or intentionally skewed to suggest that there was a problem with spinal fluid levels in MDMA users. There is no reason to believe that MDMA has any effect on spinal fluid levels.

65. MDMA has been proven to cause brain damage.

This is a huge oversimplification and makes no mention of the large debate surrounding this topic. There have been and continue to be many studies into the effects of MDMA on users. While there does seem to be evidence of changes to the brain in those who use MDMA heavily and frequently, there are very few clinical studies showing any negative effects. This is a very complicated issue.⁶⁵

66. Street Ecstasy is frequently cut with heroin.

This is a persistent rumor with very little supporting evidence. Of three sites doing anonymous testing of MDMA pills over the past several years, there have been no reported findings of heroin in tablets sold as MDMA. While MDMA pills are reasonably likely to contain substances other than MDMA, they are much more likely to be caffeine and amphetamines than heroin.⁶⁶

MESCALINE

67. Mescaline comes in microdots, small pills, or gels.

An average dose of mescaline is in the 200-500 mg range. 500 mg of a material can be squished into a large capsule ("horse pills"). There is no way that even 200 mg of mescaline would fit into a small microdot or gels. If it's in a gels it is almost certainly LSD, though it's possible it could also be a substance with an active dose below 10 mg, such as DOB.

MUSHROOMS

68. Psychoactive mushrooms are "toxic."

The word "toxic" is often used by mushroom field guides in reference to psychoactive species. This is generally an attempt to stop people from eating them while still being able to document them, as well as a misunderstanding of the effects of psychoactive mushrooms. The term "toxic" is often used interchangeably with "poisonous", the clear implication being that they are dangerous or cause damage. Psilocybin mushrooms have not been shown to cause any damage to those who ingest them and are considered one of the safest psychoactives known.

69. Psilocybin/psilocin breaks down in boiling water.

There's a persistent rumor that it's not possible to make mushroom tea because the heat of the boiling water will break down the active ingredients. However, many people consider this their preferred method. Boiling mushrooms briefly seems to cause no noticeable decrease in potency.

DRUG TESTING

70. Drug testing techniques are accurate.

Independent reviews have shown that urine testing is notoriously inaccurate. There are no federal requirements about drug testing procedures for non-government employees, and employers often use inexpensive, inaccurate testing companies. In 1989, a NIDA study found that only 8 out of 79 laboratories (10%) reported correct results returning positive results for a sample containing drugs and negative for a non-drug containing sample.⁷⁰

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BUSTING PSYCHEDELIC MYTHOLOGY

by Dan Joy



On July 15th, 1999, the Drug Enforcement Administration declared ketamine a controlled substance, adding this wacky injectable out-of-body psychedelic and veterinarian's pussycat tranquilizer to Schedule III of the Federal Controlled Substances Act, effective August 12th of the same year. With the government giving this level of notice to a relatively obscure psychedelic, with psychedelics-oriented organizations, conferences, web sites, and journals proliferating like magic mushrooms on cowshit as the new millenium begins, and with the Ecstasy-driven rave scene finally exploding into such fly-over-land bastions of tedium as Iowa and Idaho, it's abundantly clear that psychedelics are back, and possibly bigger (and some say better) than ever before.

Now, therefore, seems as good a time as any for me—as a long-time activist/writer in this area—to come out of the closet with my viewpoints on a set of prevalent but highly questionable truisms (what I'd call just plain *myths*) about psychedelics that remain widespread, not among the psychedelically misinformed population at large, but among the community of long term psychedelics enthusiasts. So at last I'm going to take my most neglected pet acid-related axe out of the ol' toolshed and grind it here in *TRP*, by debunking several cherished notions about trips and tripping that for decades have been clutched tight to the heart by perhaps the majority of those for whom tripping is an indispensable part of life.

Myth #1: Psychedelics = "Higher" Consciousness

First off, let's look at the idea that LSD and other psychedelics promote some sort of "higher" consciousness. Objectively speaking, of course, there isn't any such thing as "higher" (or, for that matter, "lower") consciousness. Who first insisted that *consciousness* is somehow inherently *vertical*—like some kind of ladder with higher and lower rungs—anyway? No doubt some power-tripping "spiritual" guru-hustler trying to sell potential followers on a

particular state of consciousness because he could use it to control them, fuck them, or appropriate their funds and possessions while they were obsessively busying themselves with trying to reach said "higher" state.

I don't believe in higher and lower consciousness, only in relatively expanded/inclusive *vs.* relatively exclusive (limited or narrow) consciousness. And one isn't necessarily "better" than the other. Depending on one's predispositions and the life-task at hand (like paying the bills, for example), a more expanded or inclusive (and therefore potentially more drifty) state of consciousness can be the last thing the doctor (or your accountant) would order.

The mass of data accumulated from about 40,000 subjects of psychotherapeutically-focused psychedelic research conducted back when such pursuits were legal—highlighted by the work of globally-renowned psychedelic psychiatrist Stanislav Grof (author of *LSD Psychotherapy*)—undermines at least any necessary equation between tripping and so-called "higher consciousness." This body of information clearly indicates that psychedelics are just as conducive to entering the "regressive" states of the first and second chakras (bioenergetic centers equated by many spiritual traditions with so-called "lower consciousness") or what Grof calls the "perinatal" and "early biographical" domains of the psyche (whose contents include infantile neediness, childhood traumas, potty training, anger, rage, images of blood, guts, feces, etc.) as they are to arousing "higher" mystical or "unitive" fourth-through-seventh chakra levels of consciousness, or what Grof calls "transpersonal" states.

And after all, "higher" and "lower" consciousness—like all terms rooted in models of verticality and hierarchy—are gravity-based concepts. I prefer to think of psychedelics as more of an anti-gravity, free-fall type of kick.

Illustration by cris@quetzaltenango.com

Myth #2: The Necessity of a "Guide"

The last thing people on high doses of acid need is a "guide," of the "spiritual," "tourist," or any other type. Having someone around trying to tell you where you're supposed to go and "guide" you there—in other words, trying to impose any kind of preset agenda or value system on your trip—has got to be the most sure-fire route to a big time bum out. All someone on a heavy trip really needs is a tolerant and affectionate baby-sitter—hopefully of the tripper's preferred gender—to handle logistics (like getting a glass of water or helping you locate the bathroom amongst the sea of writhing paisleys), and to provide a fragrantly fleshly (and in my case, preferably freckled) human pillow to nuzzle and hold onto while the universe polymorphously (and sometimes perversely) oozes around you.

Myth #3: The "Bad Trip"

The whole phenomenon of the personally apocalyptic, classic "bad trip" is, in my view, a non-necessity that has been spawned, fostered, and promulgated not only by sensationalistic government propaganda but by acid advocates themselves—the very ones, in fact, who believe in "higher consciousness" and insist on the need for "guides." Many trippers are conditioned to believe, by their "guides" or other dogmatically-inflected sources of information about tripping, that if they aren't entering "higher consciousness" but instead a state of mind inclusive of fear, anger, visions of dingleberries, or whatever (in other words, components of the psyche at least as integral to human experience as mystical bliss, though perhaps less savory), then they're either doing something "wrong" or something's "wrong" with them. It's the judgement placed on these trips and those who have them—by the trippers themselves as well as many of their fellows in psychedelic subculture—that I believe generates "bad" trips more than the actual content of such trips.

In fact, I think the very meme of the "bad trip"—a state of consciousness to be avoided at all costs as opposed to just another pool of cosmic flotsam and jetsam to float through—is often what creates "bad" trips. If there's no particular value system or agenda imposed by a guide or other source, these trips, instead of becoming catastrophes, become merely painful or difficult episodes—and can be quite hygienic for the psyche, like a visit to the etheric dentist or an application of "mental floss." The work of Grof and others does in fact show that such trips can be just as constructive as "good" or "higher consciousness" type trips from a psychotherapeutic standpoint.

Myth #4: Psychedelic Usage Leads to "Enlightenment"

Corollary to the equation of tripping with "higher" consciousness, this is the assumption of a necessary relationship between tripping and the eventual achievement of some kind of "spiritual progress" or at least a greater degree of psychic integration or mental health. Trips may give you new information and experiences, but your "growth," however you choose to define that term, will be served only by doing the tough daily work of remembering this information and experience, selecting out of it what's relevant, and doing your damndest to integrate it into your moment-by-moment existence and behavior.

Few have the integrity and determination to follow through with this often seemingly Sisyphean task, and those who do may benefit greatly from psychedelics. But these few will find their way whether they take psychedelics or not.

Many psychedelics enthusiasts, it seems to me, are still, consciously or unconsciously, seeking the magic molecule that will make their desired growth process *automatic*—in other words, the drug or drug combination that, if used sufficiently and "correctly" will, *a la* the title of the classic Philip K. Dick story, "Do It For You Wholesale." But to my mind, any "personal growth" process is about becoming *less* automatic, less automatized. So as far as I'm concerned, the very idea of *automatically*-functioning agencies of such a process, whether human, yogic, spiritual, technological, or chemical, is just oxymoronic bullshit.

The new generation of devoted psychedelic surfers is, to my eye, a little hipper, more sophisticated, and less stodgily dogmatic than the last.

It's Getting Better All The Time—I Hope

While the paucity of significant new published work on psychedelics in the '70s and '80s may have left a vacuum of literary stimuli that contributed to the ossification of the mythology I've been debunking, the '90s, by contrast, have seen a flood of psychedelic literary activity featuring several books that may be assisting a slight but visible loosening of this formerly almost concrete understructure of presumptions. To wit: the widely read psychedelic megatomes *PIHKAL* and *TIHKAL* by Ann and Alexander Shulgin, a husband-and-wife research team whose writing evinces an extraordinarily sophisticated, flexible, and multidimensional—but nonetheless highly scientific—approach to tripping. The recent appearance of *From Thanatos to Eros*, by Myron Stolaroff, who conducted legal research with acid in Menlo Park in the '50s, may also be having a helpful catalytic effect by documenting the "positive" psychological results Stolaroff has won from what many would call "negative" experiences or "bad" trips.

Judging by the most recent psychedelics conferences and the other venues through which I've met and talked to many of the seemingly huge international new set of young, up-and-coming psychedelics *aficionados*, all of the myths I've been talking about do seem to be at least *somewhat* less unquestioningly accepted than they were even a decade ago. The new generation of devoted psychedelic surfers is, to my eye, a little hipper, more sophisticated, and less stodgily dogmatic than the last. It's my hope that raising my voice in *TRP* will, at a time of highly visible—and apparently expanding—psychedelic activity worldwide, assist in at least some small way with the eventual complete disposal of the dubious and dangerous ideas that so many trippers have about tripping.

Dan Joy is co-author with John Morgenthaler of *BETTER SEX THROUGH CHEMISTRY: A GUIDE TO THE NEW PROSEXUAL DRUGS AND NUTRIENTS* and co-author with Dr. Beverly Potter of *THE HEALING MAGIC OF CANNABIS*. Dan performed extensive research and writing for *THE LITTLE BOOK OF ACID* and *ACID TRIPS AND CHEMISTRY*, both published under the collective pen name "Cam Cloud." He authored the introduction to the Third Edition of Peter Stafford's *PSYCHEDELICS ENCYCLOPEDIA*, on which he also performed editorial work.





an interview with

Dave Nichols

by Tim Sattelman

You started work with psychotropics or psychotomimetics thirty years ago — the Summer of Love. How was your decision influenced?

Well, that was of course in the mid- to late 1960s. There were some number of people at the University of Cincinnati and the University of Kentucky who were in small enclaves, I suppose. Maybe there were a few small groups. So I knew about psychedelics, but in the Midwest, it wasn't really a big thing. It was more academic curiosity. Not many people in my circle of friends knew very much about them. I was sort of considered the scientific wizard and so I would keep up with the literature and tell them what was happening. They'd say, "Dave, did you ever hear of this thing?" and I'd say, "Oh, yes, that's such and so and thus and so." I was sort of a resource for questions.

So your interest in psychotropics is older than your research in them?

Yes, it would probably go back to at least three or four years before I actually went to graduate school.

Did your interest stem from personal experience?

Well, from people I knew.

So how would you compare the climate in psychedelic research at that time to today? Do you think you can describe how it evolved during all this time?

In the beginning, of course, they were called psychotomimetics. The government really got interested in where LSD was coming from — I think in 1965 or thereabouts. The rumors were that the communists had infiltrated universities and were putting these drugs in, and so I believe a lot of resources were mobilized to find out what were the

sources. Teams went into a lot of universities to find out where the drugs were coming from, who was supplying them, what their sources were, before they concluded that it really wasn't a big organized conspiracy. But I think there was a lot of hysteria. You can't separate that time from what was going on socially in the country. There were protests and a tremendous amount of turmoil over the Viet Nam war. Even the music was reflecting protest. A whole generational protest against the parents was happening. You added the drugs in, and it was a fairly chaotic time. So there was a lot of interest in how psychedelic drugs worked. It was much more difficult in the midwest to get information — some of the writings that Leary and earlier people had done — those weren't readily available like they were on the west coast, for example. But there was a lot of interest, a lot of concern over the use, and of course the government was putting out a lot of stories — as much as they could — about the dangers of these drugs, and why you shouldn't use them, that they would damage your chromosomes, and various sorts of things. So it was much more hysterical. I think funding for research was probably more plentiful, because politics drove the funding in the area of drug abuse. So it was much easier to get funding. But as that tapered off, and the use of psychedelics sort of dropped off, maybe in the early 1970s, the scientists who had been working in that area got out. It was much more difficult to do clinical studies, so no clinical studies were occurring, and you had a period in the early to mid 1970s where a lot of clinical investigators did retrospectives, wrote up, "Well, this is what we did, and this is what we found, but we can't do it anymore, and hopefully somebody will be able to do it some day," and it was sort of a eulogy for psychedelic research. But I guess I was tenacious and just kept doing it. Gradually everybody just sort of disappeared from the field, except for a very few.

How would you describe your role today in academia, as a chemist and a pharmacologist, and also as part of the psychedelic movement?

My perspective has changed over these thirty years as well. In the beginning it was more a curiosity about how these worked and what we could understand about the structures and so forth. My interest was more focused toward why people use these substances. I really didn't focus my attention so much on the positive aspects. But within the last decade, I guess I've thought a lot more about it. Imagine —

Imagine all the things that can change your life. You might fall in love, you might get married, have a child, get a divorce, a loved one dies. Or you take a dose of LSD. How is that possible?

and I've used this analogy with people I've talked to before so maybe you've heard this, but I'll tell this story. Imagine all the things that can change your life. You might fall in love, you might get married, have a child, get a divorce, or a parent dies, a sibling dies, a child dies. Or you take a dose of LSD. How is that possible? What's the substrate in the brain that such a relatively small number of molecules can permanently transform the way that you see and appreciate life and your role in it? That became a really interesting question. I began to sense, I think, the deeper implications of how these drugs could work. And now, of course, they're finding that the receptors that psychedelics stimulate — the serotonin 2A receptors — are very dense in the cortex, that they're probably involved in cognitive processing — sort of doing the number crunching in the cortex. One fallout of that is interest in new antipsychotic drugs that block serotonin 2A receptors. So I think these receptors — and it's not surprising if you really think about it — these receptors are fundamentally much more important in defining who we are and how we really see things than people have formerly thought. I think people who took these drugs, or people who did clinical studies with these drugs, always believed that they had some deep, profound importance, but I think a lot of that belief was just blown off by the drug abuse establishment, in a propaganda effort to try and shut off all use of these drugs. But in fact, I think that these drugs stimulate parts of the brain that are very important, extremely important, that we should be interested in, in terms of how we process sensory information and normal cognition and a lot of very fundamental human mental feats.

You mentioned antipsychotic drugs that act at the same sites as psychotropic agents do. Do you see now that drug companies have become more interested in your research than they used to be?

They're more interested in receptor antagonists for that receptor.

There are some companies who are actually interested in serotonin 2A agonists now, more related to understanding how they affect cognitive function, because we have Alzheimer's, senile dementia, and lots of disorders where in fact if the idea that these are mind-expanding drugs — if that were true in some sense, then you may be able to develop drugs that would stimulate these receptors and actually produce enhanced cognition. I think the possibilities are there. They've been so heavily obscured by the drug abuse propaganda that it has been difficult for a lot of people to see.

Perhaps I am over-estimating this a bit, but I feel that over the last few years, since drugs like Viagra and Prozac came onto the market, new pharmaceuticals are not so much about treating an illness but about enhancing the quality of life. If you push this a little bit further, the drug companies could tap the vast resources of people who are not ill but only want to feel better — do you think that the drug companies could become allies of the psychedelic movement? Do you think any change is on the way in that respect?

I think there will have to be some change. When we have effective drugs to treat all the major illnesses, then you have people who enter into middle age or late middle age who can't remember faces and names anymore, who forget telephone numbers, who really cannot do mental feats like they could when they were younger. I see no inherent evil in developing drugs for those people. In the past, the problem has been that drugs were only developed for pathological conditions where you could identify specific problems that you had to fix. But I think the drug companies will eventually see the other possibilities. There is a huge market for cognitive activators, certainly among late middle aged and geriatric people. The companies are only looking at drugs to treat Alzheimer's and various types of dementia. But that's just the first step. I think that once you discover how to enhance cognition in Alzheimer's, what's to prevent you from enhancing cognition in someone who doesn't have Alzheimer's, but who maybe can't remember telephone numbers or can't connect faces to names? I think that will come. There is the demand for it. You could probably talk to the average man on the street anywhere in the world who was having problems with his memory at any age and say, "Do you think it would be an evil thing for a drug company to develop a drug that you could take that would enable you to have the kind of memory you had when you were twenty years old?" I mean, nobody will turn down a drug like that. And the drug companies know that.

Sure. I had more in mind a drug that simply enhances your mood, your perception of life or your joy in life — something like that.

Well, I think things will happen in steps. I don't think there will be anything dramatic. The shift that you saw with Prozac being used in people who clearly did not suffer from profound depression and the use of Viagra in people whose lives were normal in other ways, I think you'll see other incremental changes. I think drugs to treat cognitive deficits will probably come along next. And there'll be a big debate about whether they should be given to college students to help them study for exams. So you'll have this series of debates

as new drugs are discovered. There is a Calvinist notion in U.S. society that you are born with all the mental tools you need, so that if the quality of your life is not what it should be, then too bad. Those are the cards that God dealt you and you should just play them. I think that we are going to have to enter into that debate, because I suspect that there are a lot of people in the world today who suffer from a sort of vague sense of anhedonia. They see other people who really enjoy things, who say things like, "What a great meal, what a beautiful picture, what a wonderful concert" — but they say, "Yeah, yeah, you know, it was ok." I mean, why shouldn't those people be able to experience those things at the same level? So we have this sort of Calvinist doctrine now that says, "I'm sorry, that's just the way you are, you're not going to be able to appreciate these great works of art and great works of music." I think the debate will come at some point. I don't know when it will be. I don't think it will be very soon, but I think a debate will come eventually. Those drugs will become available. They may only be on specific occasions. You might not be able to take them all the time, but you might be able to get something akin to a prescription — go to a doctor and say, "I'm going to go to the symphony on Friday, and I really don't like symphonies, but I would like to take this symphony-enhancer drug that I've read about so that I can appreciate it." And whoever the shaman or psychiatrist is at that point in our culture that is dispensing things will give you that and you'll go and just have a wonderful time at the symphony.

You think that is going to happen?

Oh yes. But the question is when. It just doesn't make sense to operate forever under this kind of Calvinist, suffering doctrine. If you see people who go to an opera and the singer is singing something really emotional, and tears just run down this person's cheek, and for them it's just such a wonderful thing, someone else will sit there, watching and think, "What's her problem? I mean, she's obviously getting a lot of this opera, but it doesn't affect me that way." The person who doesn't feel to that depth is being deprived in a certain way, I think, of the emotion that the author of that opera intended to convey to the audience. When Beethoven wrote a symphony, presumably he felt tremendous passion when he wrote that symphony, and that's the passion he wanted to convey to the audience. If you're not feeling that passion, it seems to me you're not in touch with the true Beethoven, right? I mean that's what I would say. And if you can't experience that passion, if you're not in touch with the true Beethoven, why shouldn't you be allowed to have the experience that he intended to create and convey? Those things have to come. To me, there's a sort of moral rightness in everybody being able to experience things like that. The same thing for works of art, or music, or anything. All people have the right to experience what the artist tried to communicate. But I think it will be a long time. Certainly not in my lifetime, who knows, maybe in my grandchildren's lifetime. We have so many things now, but especially I think in the United States, even though there is a lot of talk about freedom, freedom doesn't extend to changing the state of your mind through mind-altering substances. That's something that's related to the drug war. I don't see that changing until there's a fundamental paradigm shift in society, until they recognize that

some of that thinking is associated with notions of good and evil that have been brought forth from Calvinist and Puritan ideas from the last century and before. Thinking seems so heavily influenced by that now. I think it's going to take a while before the perspectives change. But I think change has to come.

One way to bring this change would surely be to educate the population more and to do more research in this field. One organization that does this is the Heffter Institute, which you co-founded. Tell us about what your motivations have been in founding and working with the Heffter Institute and if you are happy with the progress made so far.

Well, progress has been much slower than I had fantasized. I am happy that we are still growing after five years, but we're also still a young organization. We just got some people on board recently, and a fund-raiser who looks to be quite good. Some things that we're trying to do haven't actually crystallized. I'm convinced that once we actually start doing some clinical studies and getting results, more people will get excited about what we're doing.

What inspired you to create the Heffter Institute?

I really had the idea for the Heffter Institute probably in the mid-1970s, after I had finished my post-doctoral work. I became aware of the work that was done with terminal patients at Spring Grove, and by Stan Grof, and I was really impressed by some of that. I talked to colleagues of mine at the time about the possibility of doing research like that in the future — and that was when the drug war was really heating up. It wasn't called a drug war, but was really a pretty vigorous, intense campaign to shut down the use of psychedelics. We had many discussions where my colleagues would say, "Well, the government is never going to fund that stuff, forget it, it's on the way out." And I would come back with, "Yes, but there must be lots of people who have had these experiences who recognize their intrinsic value who would fund it privately. We just need to find someone to do that, and then we would work through the normal regulatory authorities, write the protocols, and get this work done." And this was back in the time when I envisioned that an investment of a million dollars would give you enough income that you could do everything that you wanted to do. So that has been quite a while ago. Periodically I would meet with friends and I'd say, "Gee, I sure wish someone would set up an institute like that, I think it would be really interesting, all kinds of things could be done that we can't do now, and maybe it would be a new paradigm for psychiatry, and you could have this whole branch of psychiatry that dealt with these drugs and treated patients who can't be treated now by conventional psychotherapy and psychoanalysis, all the things that people imagine work and don't work very well." Then they would say to me, "Well, why don't you do it?" And I'd say, "I don't have an M.D. degree, so I can't do it, and what's the point if you can't work with humans?" I kept waiting for someone to do something like that, but it just never happened.

So it has been close to ten years now — 1990 or 1991 — and I was sitting around one day, thinking these kinds of thoughts and I realized that I could be sixty-five or seventy years old, sitting in my rocking

chair, still wishing that someone would start it. And I thought, well, let's just find some people who are interested and just go ahead and do it. So I contacted some physicians — mostly physicians I knew at that time — some other PhDs, and we had discussions along these lines at meetings, and just basically decided to do it. I think it's a critical thing to do, because I believe right now there is a sort of window of opportunity. There are a few people around who still believe that these drugs can play an important role in therapy, and I think that in fifteen or twenty years, most of those people are going to be gone. And then what will exist are old anecdotal accounts, and paperback books that you buy in used book stores, and a few aficionados who may be still experimenting a little bit, but I think the great knowledge base that still exists now will be evaporated. And then I believe it will be much more difficult to actually bring these drugs back into the mainstream.

My basic angle has been to go back to the medical model. A lot of people disagree with that. They think physicians and organized medicine are the least well equipped to handle psychedelics. But frankly, looking at the regulatory structure in the United States, I think it's the only way it can happen in this country and probably in most places, to come back through the psychiatry establishment to show that these things can be used in a psychiatric context and hope that as the culture evolves, eventually psychiatrists who use these kinds of medicines in their practice become very skilled and recognize other kinds of applications, so that at some point in the future, the average guy who feels like he isn't enjoying life very much, and Prozac isn't working for him, can go into the psychiatrist, explain his problem, and the psychiatrist or shaman — whatever that person is called at that time — can say, "Well, perhaps some sort of psychedelic session will help you get through some of these issues, and help you see some joy in life." So I see it as an evolutionary process. Heffter is, I hope, just the beginning of trying to bring it in through the medical establishment into mainstream medicine, with the idea that the value of psychedelics, assuming it exists, will become evident and that the evolutionary process will continue until eventually they're integrated fully into medicine and are no longer drugs of — whatever you want to call them — anathema.

In your own words, what is the objective of Heffter?

The mission statement is to foster and encourage and support high quality scientific research that uses psychedelic agents as primary tools in that research.

Preferably clinical?

We support both basic as well as clinical research. I personally think it's very important to do a clinical study fairly soon that demonstrates efficacy. We know what you can do on the basic science side, we know some of the things you can do. And of course, many of us have been doing research — pre-clinical and basic research — for a long time. But really, it is important to demonstrate that these drugs can be used in a clinical setting, and can be useful for something, documented statistically, that they have a specific effect. I think it's important to establish that as a foundation before moving on the clinical side.

The Heffter Institute also has a publication, the *Heffter Review*. Number One is out, Number Two is in the making. I understand. Do you have any ambitions to develop this further than just a publication for the Heffter Institute, to establish it as one of the scientific journals one would find in most scientific libraries and make it an open forum for every researcher in this field and not only for Heffter fellows?

I frankly haven't thought much about the evolution of the journal. The Heffter Institute itself has plans to develop handbooks for the use of psychedelics — handbooks that would be useful in designing clinical protocols, etc. We actually have an outline to do that in our five-year plan that would make these more accessible to other researchers. Certainly, if we are able to get things moving in a big way, do a clinical study and demonstrate efficacy and move into some second or third studies and really get a lot of interest going, such that other investigators started looking at psychedelics as a viable research option, I could see the *Review* evolving into something that would be a means for reporting the results of those investigators. I haven't really thought about the *Review* in that context yet, but certainly that would be a good way for it to go.

Are you familiar with other journals, such as amateur journals that feature ambitious amateur research, like the German *Integration*, or the Italian one, *Eleusis*? Do you know them?

I've seen those.

Is that a direction you'd like to see the *Heffter Review* going?

One of the things we try to fairly and consistently do is maintain a standard for the Heffter that really kept it allied as much as possible with mainstream forces. Even on our web site, we've had a lot of people with alternative web sites write to us and say, "Gee, we'd love it if you would link to us." We'd look at their site and see it's an interesting and popular site with a lot of anecdotal reports and discussion of spiritual transformation and what not. We generally have not linked to those sites. My feeling is, and it's because of the way the drug war has really skewed the view of many people, that in order to have any chance of success in the United States in developing clinical protocols, and doing research that is viewed as being legitimate, we have to maintain as much as possible a sort of squeaky-clean image — if I can use that term. I think it's certainly true in the United States that it's important to do that. Otherwise what happens is, the people in the regulatory agencies that you would have to deal with — the Drug Enforcement Administration, or the National Institute on Drug Abuse, places like that — will look at you like a bunch of weirdos and won't take you seriously, and they'll throw roadblocks up for you. So our whole sort of focus has been to bring in high-quality people. Our Board of Advisors includes some really outstanding academic and clinical researchers who have good, solid reputations as far as that goes, and it has been our hope to maintain that. A lot of those publications are very interesting to read, and I read articles in some of them from time to time, but we've really tried to keep Heffter — much to the consternation of some of the people involved in those other publications — as mainstream as we could so that we could forge needed alliances

with regulatory agencies and public officials in order to bring about the transformation in psychiatry that we believe should occur.

The work with Heffter and your academic work as well demands that you stay in touch with other researchers. How would you describe the loose community of researchers in this field today? Is there a network? Do people know each other and talk to each other?

I would say that there is a reasonably good network between most of the main players. And of course, there aren't that many people who are major players right now. I think there is a good network of people who have done this work and email has really facilitated that. The Heffter board members get queries all the time. One person then sends it to everybody on the Board. A lot of times those people send it to people they know who have an expertise or interest. And before long you have an answer, or some kind of consensus. A lot of people have sent questions through the Heffter web page asking about the effect of a particular drug, or a relative who has had some sort of an adverse reaction and is being treated in such-and-such a way, and is this the way it should be done, or questions about whether they should take certain drugs, and so forth. I think we serve as a good source of information for a lot of people. We've had hundreds of questions. I get a lot of questions from people who are interested in entering a research career in this field, and we have dialogues with them about the best way to do that, is it something that's feasible for them, are they interested in going into medicine, or are they interested in experimental psychology, and so forth. I've had two inquiries from people in the last month asking the same sort of questions: "How can I get into this field?" or "What are my opportunities?" So I think there is sort of a nucleus of major players and it networks out through newsgroups and use-groups, and so forth, and I think the connections are reasonably good.

Before email, you obviously had to rely on the classic things. In the interview in the last issue of TRP (Spring '99), Terence McKenna mentions the Esalen conferences as — at that time — a very fruitful source of getting together and to know each other. How did you experience that?

Those were very interesting conferences. I went to a couple at Esalen. Remembering that I am in the Midwest, prior to email, I mean, where there wasn't much going on, those conferences put me in contact with a lot of the people on the west coast who had been involved in earlier work and a lot of personal experimentation. It showed me up front a side of the research that I hadn't actually seen first hand before. It was interesting to listen to those people's experiences and their ideas and so forth. I can't say that those meetings had a real impact on the direction of my research. It didn't really contribute anything beyond the fact that listening to some of these people's stories made me become more convinced that these drugs were important. I met psychiatrists at Esalen, for example, who had been using MDMA in their therapy. I knew a little bit about MDMA, but hadn't talked to anyone first-hand who had actually used it in therapy. You would talk to some of these therapists, and they'd say, "This is really amazing. Let me tell the story of this patient I had..."

So hearing these stories first hand really gave me much more of a sense that these things really do have value. It's not just something you read about. You hear psychiatrists giving very impressive first-hand information, so there was value in that.

So you are obviously really interested in seeing these substances back in human trials, and some research has been done lately, like Strassman's work with DMT and, I think, with psilocybin. You are also working with MDMA right now and Richard Yensen's work with LSD has been started.

No, I don't think he is working with LSD yet. But there are two other clinical groups—

No, I thought...— Didn't you actually provide the material for his work?

We did package the LSD into sealed unit doses, but as far as I know, he has not gotten approval to actually do the experiments that he wants to do.

So it has been delayed or denied?

I think it's viewed as being postponed. There are a couple of other groups that are also working with MDMA, more in just basic research. There is a group at Wayne State—

I get a lot of questions from people who are interested in psychedelic research. I've had two inquiries in the last month asking "How can I get into this field?" and "What are my opportunities?"

And they are in clinical trials as well?

Yes. A drug abuse research unit at Wayne State and also at the University of California-San Francisco. Reese Jones is the project director at San Francisco, but they're not doing anything related to therapeutic work. They're looking more at basic things, such as the mechanism of action, what are the behavioral effects, the effects on blood pressure, and so forth.

And then there's Evgeny Krupitzky, who does work with ketamine.

In Russia. Right. He's using ketamine to treat alcoholism and heroin addiction. He has some interesting and encouraging results. We'll have to wait and see the long-term follow-ups and how effective it ultimately turns out to be, but that's very interesting work, with ketamine.

And do you think to get substances like that into clinical trials that it is easier or more difficult in the U.S. compared to the rest of the world?

I think it is more difficult in the United States. By far.

So you would expect more research in foreign countries.

In Germany at Aachen, there's Dr. Gouzoulis, who has a funded research project looking at mescaline, MDE, and amphetamine. She is trying, I think, to pick out elements of drug-induced experience that may in some ways parallel what happens in psychosis. This idea of psychotomimetics was for her and Dr. Leo Hermle, another investigator at Gottingen, sort of a model paradigm that they were using. There is another fellow in Germany, at Ulm, named Dr. Manfred Spitzer, who has done some really elegant work with PET

We played with the methyl group on the nitrogen of LSD and replaced it with propyl, ethyl, and allyl. All those compounds were as potent or even more potent than LSD.

imaging and psilocybin. He was at Heidelberg, but has recently moved to Ulm. In the process of moving, of course, his research program has been more or less delayed, but I would expect that he'll probably start working again. He was doing some really creative things, looking at the effects of psilocybin on cognitive processing. Of course, in Switzerland, Dr. Franz Vollenweider is probably the most prolific clinical researcher with these drugs today. I think in every case they haven't had the difficulty getting the drugs and getting the permission that you have in the United States. It's just incredibly difficult to get permission in the United States. Rick Strassman spent a couple of years in dialog back and forth with the FDA in order to get a study approved and was really very tenacious and very persistent. He had some things going for him in terms of DMT having been studied in humans before. It had been speculated that it might be an endogenous psychotogen, might be produced within the body, that there were mechanisms such as monoamine oxidase within the body to degrade it quickly, and it was short acting. He had a lot of things going for him in terms of selecting that particular drug to work with, and it still took him years to get the study going.

According to an interview with him in an earlier issue of TRP he thinks that getting research with psychedelics approved now is easier, that he was the first one to break the resistance after a long time. Do you agree?

He was the first to do it, he showed it could be done. To some extent I think it was also related to personnel and some administrative changes at FDA. I don't believe it's quite as easy now as when he did it. There was a particular individual at FDA then who worked with him. The FDA had a lot of projects that were on hold and they met and decided that if studies were well designed there was no reason that they should remain indefinitely on hold. Strassman has to be

given credit for being the first one to show it could be done because for so many years people would just routinely say, "You can never get these into humans — the government will never allow you to do studies in humans." I met countless numbers of people and I'd say, "If you work and if you're qualified, you can do it," and they'd say, "Oh, no, no, no, no, you can never get them into humans." Strassman demonstrated that wasn't true by saying, yes, if you are qualified, if you have the academic credentials, if you've got a well-designed protocol and if you are willing to jump through all the hoops you can do these studies.

Yes, but Richard Yensen is still waiting. His study with LSD is ready to go and has been for two years.

You have to consider what the FDA and the DEA are looking for. Strassman was an Associate Professor of Psychiatry at the University of New Mexico who had an experienced staff of people there who had helped design his protocols. He had a support team there that was going to take measurements and draw blood samples. He had the whole structural setting of a hospital as a back up and infrastructure. Richard Yensen has the Orenda Institute, which I understand is within his personal residence. It doesn't have the infrastructure of a hospital, he's not in an academic research department, and he doesn't have all the other tangibles that you find in a research institute. I think the regulatory people look at Richard and look at the structure / infrastructure, the support staff, clinical experience, and so forth. A lot of factors come into it other than just the fact that you are tenacious and work hard. You have to consider who the people are in the government agencies that you're dealing with. They may see themselves as trying to prevent some kind of public relations disaster.

So that supports you trying to maintain such high standards at Heffter.

Exactly. You have to.

Let's talk about your research. There was an article in the first Heffter Review and of course in the Journal of Medicinal Chemistry about these new, extremely potent phenethylamines you came along with. Can you tell us about that?

Most of the phenethylamine psychedelics are very flexible, floppy molecules. We have essentially tried to constrain portions of those molecules into particular shapes with the idea that when these things bind to their brain receptors, if we could lock them into the same shape that the receptor had, their potency would increase, and that would give us some idea of what the shape was, much in the way — to use a simple analogy — that you might start grinding on blank keys and sticking them into a lock and trying to turn it, then grinding them some more until you finally find one that turns the lock. It is sort of the same kind of idea, except we were locking parts of the molecule. We had played around with the two-carbon side chain and locked it into a lot of different shapes. Some years ago we started to lock the methoxy groups in 2C-B or DOB and found that there were particular orientations that they had to be in to have the most potency. And that defined the shape that they had when they bound to the brain serotonin receptors. That increased the potency. Then

I had a student working with me on his PhD — Matt Parker — and he was talking to someone in another research group who was making aromatic compounds and realized that what we had in some of the rigid compounds we'd made with the methoxys locked was the possibility of converting them into completely aromatic compounds. So he took some of these precursors and made them completely aromatic with three flat rings. When we tested them they proved to be extremely potent in the animal models and had extremely high potency at the receptors. In fact, as far as we know, in the models we have, in the animal models and the receptor binding assays, those are the most potent drugs in binding to these particular types of brain receptors that have ever been discovered.

Are they more potent than LSD, which was the so-far unmatched standard?

Yes. If you actually look at the ability of LSD to bind to the serotonin 2A receptor, which is the presumed brain target, LSD isn't actually quite as potent as things like DOB or DOI. They are slightly more potent. But in terms of the animal model, when you look at the whole animal, LSD was far more potent than any of the simple phenethylamines. We think there is possibly some sort of interaction in the brain between the different things that LSD does that amplifies its potency beyond what you would predict just from its ability to bind to serotonin receptors. When we tested these rigid phenethylamines in rats, they turned out to be more potent than LSD. That is the first example of phenethylamine compounds that we've tested in our animal model which actually were more potent than LSD. They are also tremendously more potent in receptor binding than LSD, about a hundred times more potent. In rats, of course, the increase in potency is not as great. It's maybe two- or three-fold more. But still, to find a very simple amine that has such high affinity tells you it is binding and activating that receptor very well.

You mentioned lysergamides. What are the recent developments there? LSD is fifty years old.

We did some early work where we played with the methyl group on the nitrogen of LSD and replaced it with propyl, ethyl, and allyl. All those compounds were at least as potent or even more so than LSD. But that wasn't really exciting, because it kind of made sense from what we knew about what the receptors were looking for. We have focused most of our attention on the diethylamide, because the potency of LSD is so exquisitely dependent on what that amide is. We've made a lot of compounds that we haven't even published data on. We have receptor binding or rat assays, and I think it won't be too long before we write some sort of review and summarize everything we know. We have some new compounds now where we've also used this rigid analog approach to constrain the diethylamide into different orientations. We know from our receptor binding data that one of those orientations is much more potent than the others. We will be in the process of getting further biological data on those in the near future. I think that will be very important work because in that paper we will define what the shape of those two ethyl groups is when LSD actually binds to its receptors, or the key receptor that the rats are responding to, at least. LSD binds to a

large number of receptors, not just serotonin 2A receptors. One of the things we're hoping is that by constraining the diethyl groups into these differing orientations, these molecules, three different rigid LSD analogs, may bind to subsets of the total set of receptors that LSD binds to. That may give us a better clue as to why LSD is so potent, beyond what you'd predict from the binding to serotonin 2A receptors. I'm really hoping that those will be key compounds. When we write that paper, we'll probably put some other compounds in and follow it up with some of the things we haven't published, really try to define the nature of that part of the binding site in the receptor, and some of the other receptors, dopamine receptors, and some of the other serotonin receptors. I think that's really an interesting area to look at. We've done some work already with another serotonin receptor called the 5HT_{1A} receptor. LSD binds to that receptor as well, as do things like DMT and psilocin. And we know that receptor has a very different shape around the amide group than the serotonin 2A receptor. So we think we might be able to target lysergamides to different kinds of receptors by very carefully tailoring the nature of what's attached at that location of the molecule.

You have already done a very good job of tuning the potency of the molecules. Would that be a step toward tuning the effects?

Well, I think it would certainly be interesting if you could ever do clinical studies on these molecules. You have a molecule like LSD that binds to fifteen receptors and has a certain qualitative effect, then you somehow parse that into three molecules that all have a subset of the receptor actions of the parent molecule. Now if you can do clinical studies I think you're going to be able to relate some of the clinical effects to those specific receptors. The analogy I use is having a series of simultaneous equations with X unknowns. With LSD you've never had that possibility before. You've had this unique potent agent that binds to all these different receptors. The only way it was discovered that the serotonin 2A receptor was a target was by having other classes of psychedelics, the phenethylamines and tryptamines, and the only thing they had in common with LSD was binding to the serotonin 2A receptor. So in a sense, you had a series with those. But still, when you go back to LSD it's a unique compound which has unique properties, and we still don't have other examples to really be able to pin down what effect LSD has at all these other receptors. We are hoping that by playing with the amide function we can develop a series of compounds that will really help us to understand the importance of that particular part of the molecule in targeting different receptors and subsequently in producing different behavioral effects.

You already mentioned animal models and the rat studies. Unfortunately, you can't go into human trials. Or perhaps you don't want to go with every compound into human trials. But you test them somehow. How does this work?

What we use is probably, in my opinion, the best assay that you can use in a laboratory outside of a primate or a human. Essentially what you do — and the rats are not mistreated at all, so it's not stressful — you put the rat into a chamber. It's just a small cubicle

that has two little bars protruding on one wall, one on the right side of the wall and one on the left side of the wall. In between the two bars is a little opening that delivers a food pellet. Essentially what you do is put the rat in and let him wander around. He eventually learns that if he presses the bars little food pellets appear in the opening. Once he learns that if he presses a bar he gets this reward then you shape his behavior. You turn on only one lever so it activates the food pellet delivery only when the rat has been given a particular drug or not been given a drug. For example, suppose we put the rat in the box on Monday and we don't give him any drug at all, or we give him an injection of just saline or placebo. We turn on the left lever. Now the rat presses the left lever and gets his food reward. If he pushes the right lever nothing happens. We put him in on Tuesday, and we give him an injection of LSD. But now, we turn on the right lever. So he only gets a pellet when he presses the right lever. If he presses the left lever, nothing happens. It's actually done over a period of two to three months, and by a variation of that procedure, you teach the rat that if he has received no drug, he presses the left lever. If he has received LSD, he presses the right lever. It's called two-lever drug discrimination.

That must be pretty laborious.

Yes. In the beginning you have to teach the rats how to press the lever and then you have to couple the lever-pressing with particular drug treatments. We also train some of the rats to press the right lever if they're given LSD and some to press the left lever if they're given LSD, so you don't have the possibility of a sort of "handedness" in rats, that rats might always press with the right paw if they've been given LSD, or whatever. It's all computer-controlled. The computer knows which rat is trained on what drug and which lever he should press, and it keeps track of all the presses. So on any given day, once we have these rats trained, if we give a rat LSD and put him into the box, in fifteen minutes he may press the correct lever two or three thousand times.

Just one rat? So often?

Yes. It's unbelievable. They just press and press and press.

Do they eat that much?

No, they can't eat that much. What happens, actually, to save money, and because they press so many times, they only get a food pellet every fifty times they press. So the rat has to press the lever fifty times. He hears the click, he gets the food pellet. We don't give them all the food that they want to eat. We give them enough food so that they're maintained at about 80% of the weight that they would have if they could just eat all the food they want. So when they go in the chamber they're always a little bit hungry for a snack. These pellets have a high carbohydrate content, so they're kind of like rat candies. So, when they go in the box, they know if they press the correct lever fifty times they'll get a little rat candy. So they start pressing. We've trained rats not only on LSD but on other drugs as well — LSD, MDMA, DOI, and amphetamine. And the beauty of this assay is the rat only responds to the drug he was trained on. So if we have rats that were trained to respond to LSD, if we give those rats amphetamine they respond as if they were given no drug at all. So

the rat either says it was like the training drug or it wasn't like the training drug. "You gave me LSD," or "you didn't give me LSD." It's a great assay.

So that's your way of testing the drugs.

Right.

So the rat thinks this is LSD-like or MDMA-like?

Exactly. The rat tells us if he thinks he was given LSD or not. And what we do then is we test a large number of rats. We have anywhere from twelve to fifteen rats and we start giving them different doses of drug. We find the dose at which all of the rats say, "You didn't give me LSD," and the dose at which all the rats say, "You gave me LSD," and then we find the dose at which half of the rats say, "You gave me LSD," and half the rats say "You didn't give me LSD," so it's sort of intermediate. Then by using that dose response — it's called a dose response curve, which tells us what percentage of the rats think it's LSD depending upon the dose — that allows us to estimate the potency of any new compound relative to LSD.

So the animals don't die during the assays?

Oh no. We avoid doses that are toxic. Because we have so much invested in these rats, we try to be very careful. The rats cost us a lot to maintain. We pay more to maintain the rats than it would cost for them to live in a hotel. For rats, it's pretty expensive. By the time you have all the costs in housing, plus two to three months of training, and then after you train them, calibrating them to make sure they're working correctly and giving the kind of numbers that you expect, by the time you do all that plus the time of the personnel to do all the training, each of those rats is very precious. For the woman who is my research associate, each of the rats has its own personal name and she talks to them. She treats these animals almost like little people. So we really treat them pretty carefully. It's rare that we ever give a rat something that's toxic. We usually have a good idea before hand of whether it should be toxic because of the kinds of compounds we work with. In fifteen years I can't remember if we ever lost a rat to an overdose, but if we did it was a real accident. I know when a rat gets sick or dies because my research associate gets pretty upset, because she's the one who trains them.

As sophisticated as this behavioral model seems to be, whatever happened to self-administration? Albert Hofmann did it fifty years ago and if he had not done it, we would perhaps not know about LSD and its effects. And of course, Sasha Shulgin did it and wrote two books about it. So why is this no longer acceptable?

Self-experimentation has gone the way of the five-cent cigar. I think Shulgin was probably the last in the tradition. Science in general had a long history of chemists tasting compounds. That was sort of a traditional thing that was done. After the drugs became popular in the 1960s, I think the use of drugs was somehow defined as immoral. It really has become a sort of de facto definition of drugs, that using them is somehow inherently immoral. Self-experimentation, while it would only seem to involve risk to the experimenter, I think has been defined in a larger context as somehow something very bad. I

think that came with the whole drug war, the anti-drug thing, or maybe it even preceded it. You had such an over-reaction that no use of a drug was tolerable, that it's criminal. If you talk to a lot of people today about Albert Hofmann taking 250 micrograms of LSD on purpose they say, "Oh my God, it's unbelievable, why did they let him do that?" That would not be tolerated at a company today. If you discovered a drug like LSD through a self-experiment today, while working at a modern pharmaceutical company, you would lose your job.

But he didn't know what he was up to.

No, but after he did it he still gave it to Dr. Stoll and other officials in the company and they all took it and agreed it was really remarkable. And they gave it to other people. There wasn't this sudden, "Oh, my God, this is horrible stuff, we can't let anyone know, no, we'd never take it." It was a completely different philosophy than you would see today. I believe that if you discovered a drug today that was as profound as LSD the company would probably keep it under wraps because they wouldn't want anyone to know that one of their scientists had deliberately taken it. You'd probably never even hear about it. So I think things are not going to change in the foreseeable future, but I believe that Shulgin is right. I think he is right — you have the right to do with your body as you see fit if you don't become a burden to society. I think a trained scientist, a pharmacologist, working within a series of compounds as he did, generally knows the risks of other types of toxicity. These compounds are pretty much known not to be cancer-causing. They are known not to cause cardiovascular damage, and not to damage organ systems. The only risk was basically psychological. That was a risk he assumed. I don't see that as immoral or evil. Certainly there were people who defined it that way, and when he wrote his books they were aghast that he would put that out. They thought it was just horrible. I don't see it that way. But in fact, I couldn't do it here. I'd lose my job. People who do research legitimately would lose their jobs. They'd say you were setting a bad example, or "sending the wrong message."

How about this researcher Gordon Alles?

The double conscious technique?

Yes. Who was this guy?

Gordon Alles was a pioneer psychopharmacologist. He may have been the one who discovered amphetamine, but he discovered many amphetamine analogs. He was the first person, I believe, to report on the effects of MDA.

Oh really?

Yes. There was one of those symposia, maybe in the fifties, and I don't have it on my shelf but I've read it, where he described the effects of MDA. He was sitting in an office, way up in a building, and he could hear people talking down on the street that normally he couldn't hear. And he could hear their conversation. He saw these wisp-like smoke rings that were materializing in thin air. He actually first described the effects of MDA and he tested many compounds on himself. I think that may be the model that Shulgin has referred to as the double conscious technique. The double blind technique is

where neither the subject nor the researcher knows which drug is being given to the patient. But Gordon Alles called it the double conscious technique because he said, "I not only gave it to myself, but I know what it was, too," something like that. So it's kind of humorous.

One recent event where a drug that originally stemmed from your lab caused a lot of trouble, in fact tragedy, was when 4-methylthioamphetamine hit the streets. The pills were marketed as "flatliners."

Yes, MTA. I think that Sasha Shulgin knew that people watched the literature for papers that had him as an author, and a lot of the things he made may have shown up in different places. And this is something he and I talked about. I never had really thought that much about people watching the things that my laboratory did, although I'm sure there must have been people, and that is a good example of it. When we developed methylthioamphetamine, we were looking for serotonin-releasing agents. It had become pretty clear by that point in time that drugs that had an effect like MDMA not only had to release serotonin but also had to release dopamine and had an effect on catecholamine systems. Methylthioamphetamine didn't have any effects like that. It was a very specific serotonin-releasing agent. We thought it might actually have some uses as an antidepressant because it was so specific in its effect. We published papers on it including one showing that it did have an effect similar to the SSRI class of serotonin uptake re-inhibitors that

We have anywhere from twelve to fifteen rats and we start giving them different doses of LSD. We find the dose at which all of the rats say, "You gave me LSD."

are used now as antidepressants, like Prozac. It had that effect. But in one of the papers we published, we reported that in rats trained to recognize MDMA in the drug discrimination model that I talked about, when we gave rats methylthioamphetamine, they responded like they had been given MDMA. Rats will do that, because the feature of MDMA that they pick up on is the serotonin release. They don't also recognize the dopamine release. Rats only respond to one component of the drug that you give them. They can't recognize multiple components. Evidently someone saw that paper and said, "Hmm. MTA is a drug that the rats recognize as being like MDMA. Let's make a bunch of it." So they evidently put this material out in 125 mg tablets and sold it. I don't know how many deaths there were, but certainly at least a couple that I heard about. My impression is that these people died because they took these tablets and not much happened, and so they took more and not much happened, and then they took even more. The problem with

methylthioamphetamine is it doesn't just release serotonin, but subsequent to some of the papers we published we found that it also inhibits monoamine oxidase A, which is the enzyme that destroys serotonin. So MTA is a drug that is releasing serotonin from neuron endings, but it's also inhibiting the enzyme that would destroy all that excess serotonin. What happens is you get these incredibly high levels of extracellular serotonin, and I think that's what led to the fatal reactions. These people had huge amounts of serotonin

You could make the legitimate argument for most drugs that the banning of drugs that are relatively safe almost invariably leads to the availability of higher-potency, more dangerous drugs.

being released in the brain and their cardiovascular systems.

What do you think about those who brought it on the market and who produced it and who sold it? Were they just not thinking at all, or are they are just mean assholes?

I think they were pretty irresponsible and they were looking for a quick way to make some money. Obviously these people who made it hadn't taken it themselves or they would have realized it really didn't do anything. And if it doesn't do anything until you take six or seven tablets why didn't they manufacture tablets that had 600 mg or 700 mg in them? I don't completely understand it. I think the idea of putting a drug out without knowing what its effects are is just totally irresponsible. There are some drugs that are available on the recreational market, like 2C-B and DOB, but those have been used for so many years and for so long that the toxic effects are generally recognized, and those things are seen to be relatively innocuous. But new drugs — to come out and just make thousands of tablets of something for which there is only one or two reports in the literature on rats and no toxicology — I think is totally irresponsible. We're fortunate that only a few people died. I mean you really don't know what will happen. When you're doing something like that, when you've found some compound that's been reported in a publication and it talks about rats and you have one or two papers that talk only about a few kinds of assays, if that drug would produce some sort of extreme cardiovascular toxicity, or would produce liver failure, or kidney failure, and you sell tens of thousands of the tablets, suddenly the hospitals are deluged with 5,000 people with kidney failure after a rave and they don't know what's happening. I mean, the tragedy could have been enormous. That's why I say we are lucky that only a few people died. I think the potential for tragedy was enormous there with a compound that had no history at all.

Do events like this hurt your research or what you want to accomplish at Heffter? In a way that it harms even more the

public opinion about drugs?

Oh, of course. Because now people can say, "Well, here's another recreational drug, and see, it kills people. These things are dangerous. We know they're dangerous. We've been saying that they're dangerous and nobody listens to us and now we have two more dead people — three more dead people — who took this drug. Won't these people ever learn? Of course it hurts research.

Part of the reason why these new drugs are on the market, in my opinion, is because drugs that are comparably safe, like 2C-B, have been banned in the first place. Would you agree? In the Netherlands, 2C-B was scheduled only two years ago, or something like that. With that drug readily available, I don't think there would have been a problem with MTA.

You can get into very tricky debates here because I think you could make the legitimate argument for most drugs that the proscription or banning of drugs that are relatively safe almost invariably leads to the availability of higher-potency, more dangerous drugs. If the drugs were in some way more available or accessible then the users might be satisfied with those drugs, but when proscription occurs — and of course, this is the whole problem with the criminal approach to drug use — invariably you create worse problems. You see that with almost every situation where you proscribe a drug. So sure, if you make it difficult to get things like 2C-B, or even LSD, which is not a toxic drug in terms of organ systems — if you make these drugs unavailable and completely shut them down — or as much as you can — then you create opportunities for people to bring out things that are not scheduled. "This is a new legal high, this is a new brain drug, this is a new drug for raves" — and so you create opportunities for things that in some cases could be much more dangerous than the drugs they had controlled in the first place. I don't know how you enter that debate, because the people who control things are always going to say, "Well, we have to control these things, we have to proscribe them. People take them at their own risk." And even if you say, "Well, what you're doing is creating opportunities for people to produce drugs that are even more dangerous," their response is, "Well, we'll just have to catch them when they do it."

Have you heard that they are producing a sublingual salvinorin tablet?

What, no?

Yes, that's true. And some folks tried to market an instant pharmahuasca tablet, with 5-methoxy-DMT and harmine in it.

Really?

As an unscheduled, not explicitly scheduled substance.

In Europe?

Here, too. Of course, it is covered by the Analogs Act.

Right. The United States has the Controlled Substances Analogs bill, which covers virtually anything that comes out as a recreational drug.

Yes, but are you aware of any lawsuit where anybody has actually been accused and has been sent to jail or whatever according to this Analogs Act law? As far as I know it has never

been applied. Am I wrong?

I haven't followed that law closely. I know that the Analogs bill has been brought to bear in a couple of cases, but I haven't really followed the law to know how many. Certainly, with any new drugs that come out that is going to be the case. The DEA will prosecute. If you have a 5-methoxy-DMT and harmaline combination that people were taking, if it becomes popular the DEA will say it's an analog of DMT and something else and they will use that. I mean, there's no doubt in my mind. In Europe, if they still must explicitly schedule any drug that is proscribed, it may be more difficult. But I think even there, in England, they went through *PIHKAL* and picked out every drug in the book and made a listing, and said, "We propose to schedule everything that's in *PIHKAL*."

That's funny. But it's kind of tragic in the way the book itself provided the list of chemicals.

It gave them things to watch out for.

Do you follow the medical marijuana movement at all? Have you entered that discussion?

I haven't really done any work on marijuana. The Heffter Institute has essentially decided that we're not going to enter that debate at all. It's just simply too controversial. The marijuana laws represent a political position — the governmental authorities. There have already been hearings a few years ago by Judge Francis Young, and he ruled that marijuana should be moved to Schedule 2 and the DEA said, "We're not going to do it." This debate has been going on since Harry Anslinger first pushed the scheduling of marijuana back in the late 1930s. It is really a political football. I think the people who advocate medical marijuana have legitimate concerns. There is evidence that marijuana is medically effective. And if people having chemotherapy want to smoke marijuana instead of taking commercial drugs, I think it should be their right. We see the health food movement and the nutraceuticals movement, and nobody's concerned about any of that. Marijuana is a natural plant. I personally don't see why it should not be available for medical uses, but of course it is a political thing. The government has spent millions of dollars on drug campaigns, has spent years and years trying to convince everybody that marijuana is a great evil and the gateway to every kind of possible sin imaginable. They're not about to back off unless they're challenged vigorously in some court of law. I don't really know what will happen. But Heffter is basically disassociated from that because of the political controversy. That's an issue and a debate we just haven't gotten into.

In the beginning of our interview, you talked about how the government really panicked about psychedelics in the late 60s and all the propaganda that was put out at that time — that LSD alters your genes, alters your brain, that you'll never have the same brain chemistry after you have taken a hit of LSD — I can still hear these opinions today from otherwise reasonably well-informed people who are in other ways open-minded, but when it comes to these topics you can hear them repeating the most ridiculous government propaganda. Why do you think the whole

issue is so emotionally charged, and what do you think should be done about it?

Most of the propaganda has been disseminated by the government through the media. People in general tend to believe things the government says. There hasn't been any campaign to educate people with respect to the medical value of these drugs. I gave a seminar to a group of retired people some years ago — middle-class, retired people who were most probably conservative in their political views — and I talked about the use of LSD to treat terminal patients. They had never heard anything like that before. They couldn't believe it. And they were very interested to hear about how LSD had been used for that and was effective in 60 to 70% of those patients. They asked me why did it work, and we got a very lively discussion going where they were genuinely interested. And they said, "Well, we've never heard this before." Whenever you have a war, you have to really demonize the enemy. You demonize Saddam Hussein. You demonize Slobodan Milosevic. You demonize drugs. They can have no redeeming qualities. In order to fight a war, the enemy can have no redeeming qualities. If they do, then you might have to hold back, and not use the most powerful weapons possible—you might have to have some compassion, but you can't wage a war if you have any compassion for the enemy. You have to kill, to completely destroy the enemy. So you have to demonize things. And I think drugs have been demonized to the fullest extent possible by society. But the social aspects cannot be overlooked. During the 60s, during Viet Nam, there was a tremendous social upheaval in the United States that didn't occur in other countries. I think LSD is associated with that in the minds of many of the older people in the population. The hippies were associated with drugs and anti-war protests. So there is a whole mindset that sort of sticks it all together. Many of the people in authority positions can't think about LSD without thinking about hippies occupying university administration buildings and hippies burning flags and hippies tearing up their draft cards. So I believe there is a kind of gut reaction to drugs that transcends the pure fact of the existence of the drugs themselves.

Do you see a chance that if you came up with a new substance without a scary history like LSD that you can separate the perception of this drug, the impressions you make with this drug on public opinion, from those of LSD?

I think if you do it carefully, it's possible. I think the Heffter Institute wants to try to do something like that. Certainly we've gotten signals from some people who are in positions of authority in other countries that if we could develop a drug that has a useful therapeutic application, it would be helpful if it wasn't labeled with the initials LSD or some other well-known drug. I believe if we could develop a drug related to the psychedelics that we could put into a clinical trial for intractable pain, eating disorders, or in terminal conditions, that was effective — develop it and publish some papers in medical journals on its efficacy and show that it worked, I think people would get interested in it and it could be used as a legitimate medicine.

But you would need to avoid the comparison to LSD.

Right. We would probably not want to make the comparisons to LSD, just because of the way it would raise everybody's hackles. But I think if you were careful and could actually start publishing some studies and getting it into the literature that it was useful, using statistics, I think it would be possible. I would hope we could do that. One of the missions of the Heffter Institute is to develop new therapies that don't bear the stigma of currently known drugs, but which would have clear medical value, and possibly develop those as medicines.

I want to return to the public hysteria when it comes to drugs. It's so emotional. Nobody even wants to embark on a discussion, because everybody has such a strong point of view. Do you feel that too, or do you have any idea why this is so? It polarizes society to a bigger extent than most issues.

Certainly my experience is only in the United States. I don't know about in other countries, but I have the impression that drugs are becoming demonized in other countries as well, and some of that, of course, is pushed by the United States. It's tied to foreign aid, World Health Organization treaties, and a general consensus around the world that these things are bad. But in the United States it's perhaps easier to see because it was linked to all the social disruption and chaos that was occurring. In other countries, it's harder for me to see how you could identify linkages that would just bring about this gut reaction. Except for one possibility, and that is that everyone is always a little bit anxious when you start talking about things that affect the brain. You know, if you break your arm, you go to the hospital, they put it in a cast, and in six weeks it's healed. If you're in an automobile accident and your guts are torn out they sew you back together and in a year you're healed. But if you're schizophrenic, if you're depressed, or if you suffer from bipolar depression or some affective disorder then people don't quite know if you are fixed or if you are not. Are you normal? And they look at you and they see the face of Tim, but they know you had a psychosis and were in a mental hospital. Are you really Tim, and they're looking to see, "Is this the Tim I remember?" and they think, "When you laugh, that's a little different than the way you used to laugh." People are less forgiving of mental illness and things that involve the brain. People didn't know how to deal with it. And that attitude spills over to a lot of things associated with the brain. They become intangibles that no one knows quite how to deal with. So now somebody takes a drug and they say they've witnessed the Big Bang, or they talked to God. And people say, "Well, I've been going to church for fifty years but God never talked to me. What kind of nonsense is this?" So I think you can get people very anxious and concerned, especially about using psychedelic drugs, because they change people in ways that are not easily definable or not visible. In this country I think the perception of psychedelics was coupled with dropping out of society and the anti-war protests... And rock'n'roll music, which was anathema to most conservatives when it came out... I mean, Elvis Presley, when he was on the *Ed Sullivan Show*, I remember hearing adults saying how disgusting it was, the way he was shaking his hips. And the Rolling Stones got on *Ed Sullivan* and had to sing their song, "Let's Spend Some Time Together," instead of "Let's Spend The

Night Together." So there were all these terrible things happening to American society and it was easy to tie a lot of them in with drugs. They couldn't understand what was happening, they felt the morals of the country were going down the toilet, so it must have been because of drugs and hippies. I think that's still a gut reaction in this country among a lot of folks, especially when you talk about psychedelics.

I want to talk about the neurotoxicity of MDMA, which is among the most popular drugs of our times. The possible neurotoxicity has been a concern for a long time. A recent controversial article by Ricaurte seems to add massive evidence for the toxicity of MDMA. [ed. note: see TRP#4 for an in-depth analysis of the problematic nature of Ricaurte's work] What do you think about that?

That is certainly the main sticking point that is probably keeping much research from being done in the U.S., this neurotoxicity issue, which is one of the things that makes the FDA look at these drugs and say we want to be very careful with it. My own personal opinion from studies that we have done in rats is that MDMA does have the ability to cause the degeneration of serotonin nerve terminals in the brain. But in order to do that in rats you have to give pretty high or repeated doses. And in most of the studies in rats you have to give one single huge dose, or you give two doses a day for four days or so of a dose that is still pretty high by itself. If you give lower doses you do see a decrease in serotonin function markers but they return. The work that Ricaurte has done in monkeys — of course he is in a unique situation because he can work with monkeys and monkeys are closer to humans than rats are — he has found a no-effect dose that I believe is somewhere close to what would be the therapeutic dose, or effective dose of MDMA. It is around 1.5 or 2 mg per kg bodyweight, which in humans would translate to an effective dose. My understanding is that he has never published this finding, although privately he has told other people that there is a no-effect dose, with respect to his studies.

A no-effect dose?

Yes, that is a dose that you give that does not produce this serotonin marker deficit, it does not lead to terminal degeneration. Now, presumably, if you took a no-effect dose, and it had a therapeutic action and you took it spaced apart at intervals, presumably there would be no damage to your brain cells. One problem in the studies we and others have done on MDMA is that the neurotoxicity is enhanced when the body temperature of the animals is allowed to increase, or when the animals are packed together and their body temperature naturally increases because of crowded conditions and so forth. I think a problem is that the people who take this drug at raves take large doses. They are really not very intelligent about how much they take, they dance for hours and hours in the heated environment of a club, that elevates body temperature, and by taking repeated doses of the drug over a short period of time and being in a very hot environment I think they are doing the very things that we know can produce degeneration of serotonin axons in animals. What the proponents of MDMA argue is, "Well we don't see any

neurological effects, so neurotoxicity can't be happening because you would see something." That isn't necessarily true. If we use the example of Parkinson's disease, which is not related to serotonin neurons but to dopamine neurons, in Parkinson's disease you don't see any symptoms at all until you get a destruction on the order of 85-90% of all the dopamine neurons. No study that Ricaurte or anybody has ever done, not even in rats, has ever given a depletion close to that. We really don't have any clue to what would happen if someone had 90% of their serotonin axons destroyed. Presumably there would be some obvious effect, I mean, serotonin neurons are there for some reason. I don't think anybody has produced such a degree of destruction. Now the study that Ricaurte just reported was with subjects who have taken huge doses, up to 400 mg, and they have taken it hundreds of times. Frankly, that is drug abuse as far as I am concerned, from my perspective. That is not intelligent, that is not making smart decisions about your personal health, and if you take hundreds of milligrams of MDMA every weekend, and you do that for years, I think it is unreasonable to expect that there won't be some consequences. We know that serotonin neurons don't naturally die, whereas dopamine neurons die naturally over time, so if you destroy dopamine neurons, as you get older you might expect to see symptoms, something going wrong with the dopamine system. With the serotonin system, since those neurons don't die whatever level you damage, suppose 20%, that deficit won't increase as you get older and you probably die with the same 20% damage. So I don't know what the effects are. There could be subtle effects on mood, aggression, sleep, sex, whatever, but it is not clear at this point of time. I think there is one study that suggests that there may be some deficits in memory. I believe MDMA does have the potential to destroy serotonin axons, and I think it probably does it in humans, but particularly in humans who are consuming large amounts of the drug at frequent intervals.

Among those who use the drug more responsibly there is the belief that you can prevent a lot of the neurotoxic effects of MDMA by pre- or post-dosing with, for example 5-HTP, melatonin, tryptophan, or SSRIs like Prozac. Does that make sense to you?

Well of course we don't have any human models to know whether any of these things work. In rats, we did a study where we pre-treated rats with 5-HTP (5-hydroxytryptophan), and it did partially block the neurotoxic effects of MDMA. If you lower the body temperature it partially blocks those effects — simply going to a cold environment. In rats, the administration of Prozac up to six hours after MDMA also prevented neurotoxic effects. So if the mechanism of neurotoxicity in humans is the same as it is in rats, then those treatments obviously would provide protection. But that is still unknown. Probably it can't hurt. If people are going to use MDMA anyway, it would make sense to use some of these things as a prophylactic measure. I think there is enough anecdotal history now that suggests that the combination of 5-HTP or tryptophan or Prozac with MDMA doesn't produce an adverse drug reaction, so, certainly if someone is going to use MDMA, and they are really concerned about neurotoxicity, and if it is known that these treatments don't hurt you, they might bring some protection.

To bring this to an end, Strassman, in his interview in our last issue, stated that he thought his studies with DMT were really very interesting. But to quote him, "My primary question is whether DMT is a beneficial drug in and of itself was answered in the negative" and "Do these drugs have beneficial effects in and of themselves" and the answer was "No." That was the conclusion he reached. Do you have an opinion on that?

Well, he was giving the drugs to normal people.

Right.

Relatively speaking, whatever "normal" is. There is a whole segment of society that says, "We want to take psychedelic drugs for spiritual growth. They make us better people." I don't know if that is true, or if that's an illusion. But I do know that LSD was very effective in attenuating the pain in cancer patients when the studies were first done in the 1950s. There was no doubt about it; it was statistically proven. We also know that LSD was very effective in patients who were in pain and depressed, with terminal illnesses, facing the end of life — it was very effective there. When you use it as a medicine in a specific condition — we already know there are at least two conditions where it is effective. It does work in those conditions. Again, that is the whole mission of the Heffter — to look at

If you take hundreds of milligrams of MDMA every weekend, and you do that for years, I think it is unreasonable to expect that there won't be some consequences.



legitimate uses of these medicines and to demonstrate where they are effective and where they are not. We are constantly challenged: "Well, what about spiritual development and spiritual evolution?" And we basically don't enter that debate. I think that Strassman is looking at people in his studies who had in some cases extremely profound DMT experiences, and then on later follow-up, he asked what change occurred? And the answer was, no evident change. And I think he is right. In those cases where people just take the drugs, in and of themselves, where there is no anticipation of a beneficial effect, where it's done in an environment that's not structured to produce some kind of change, I think you're not going to see it. But I believe there are many situations where these things can be useful. I have a case report of severe obsessive-compulsive disorder that remitted following LSD administration over a period of a year or so. It was very effective. There are lots of conditions where these are effective. Maybe we could also draw an analogy to religion. There are some people who only go to church every once in a while, and they think that makes them religious. That maybe just their physical presence in the church building is enough to somehow make them religious — like osmosis or something. But I would

say it takes more, you need intention, motivation, commitment, work, and so forth. Those people aren't really religious who sit and wait for it to happen to them rather than being an active part of the process.

Those who go probably would disagree.

Yes, but objectively, is it any different? When you get into the realm of using psychedelic drugs you're also getting into something that touches on religious practice, if you talk about the spiritual use of these things. So then you have to say, "Well, if there was a church that used psilocybin, or that used psychedelics, would it be any worse than a church where they don't use one of those as a sacrament?" Maybe it would be infinitely better. I think that experiment hasn't really been done yet.

There are some churches — the Native American Church—

Lower divorce rate, lower alcoholism — they may be better churches. I think in the context of Strassman's experiments that his conclusions are valid. I think there are so many other areas where you could say, "Well, I don't think so." But the drug alone, in most of those cases, is not necessarily doing it. The drug is used within a particular context — you know, the Native American Church involves a structure; there's terminal patients, patients in pain, there's an expectation of something positive that is going to happen. So I think I would agree with what he says in the narrow context of the way he saw the drugs used, and the kinds of experiments he did. But I would say these drugs have potential in many other ways, but those have not been explored in sufficient depth.

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an interview with **Stewart Lee Allen** author of *The Devil's Cup*

by Michael Pinchera

The Devil's Cup, by Stewart Lee Allen, is a delicious 240-page brew available from Soho Press.



*Stewart Lee Allen's **The Devil's Cup** is an educational and highly entertaining adventure through the commonly dark and disturbing history of the coffee bean. Allen, a self-confessed java-junkie, spent nearly a year traveling around the world looking for the historical facts as well as the perfect cup. His daring tales of back-alley research in places like Ethiopia, Iran, India, and Brazil are captivating to say the least, and his historical analysis is as enlightening as it is rife with satirical scrutiny. What follows is a short cyber interview with the hopped-up writer who seems to be constantly on the road...*

How long did your caffeinated journey around the world actually take?

Pretty damn long if you include India; perhaps 10 months. Bear in mind, I was in no hurry to finish. In fact, it was originally my intention to never return to America. At one point I even had a stall in a marketplace in Goa, India. A good spot too, on one side German rave music and the other Rajasthani hookers. I was also stuck in Yemen for a month to have a root canal.

Which location would you note as having the most talented baristas?

Italy, hands down. I felt rather bad about giving their country short shrift, but from a historical point of view it didn't play as key a role. Their cafes, however, are less slacker oriented. The best from that point of view are French, Viennese and Vietnamese. There's nothing quite like a Saigon cafe scene. Like being in a French-Chinese gangster movie from the 1930s.

What's the strangest encounter you had in a Vietnam café?

Probably the oddest was in Dalat, a hill village where someone offered to sell me the bones of a deceased POW. Supposedly they were real, but probably just dog bones.

It was an interesting discussion because he felt the bones were the property of Vietnam because the American had bombed his country. Rather gruesome except for the fact that it was probably totally bullshit.

How many cups of coffee did you consume throughout the trip?

My publisher on the book jacket says 2,920 liters. He's hallucinating.

How much coffee do you actually drink?

I start every writing day with a depth charge (regular coffee and espresso), a pipe of Cavendish and then an espresso laced with cardamom. This can help me work but if I were to be totally honest, it's just a bourgeoisie way of getting high.

How would you describe the coffee high?

There's the pickup, then preposterous flights of fancy, then the come down. It's identical to the three stages of a classic Yemen Khat chew; the animated hour, the deep discussion hour, and "the Hour of Solomon" where everybody gets quiet and mildly depressed. What's truly funny is that the US classifies Khat with heroin and coffee with patriotism, despite the fact that the two are so close that they share a patron saint, al'Shadhili of Mocha. I think it's pretty fair to say that if Khat was less perishable (requiring generally fresh leaves as opposed to coffee's dried beans) we'd all be taking Khat breaks and Starbucks would be the nation's largest illegal drug cartel.

Were there any strange encounters that didn't make it into your book?

I originally had a whole section on the coffee shops of Amsterdam. I can truthfully say that it wasn't until I was tripping on Amsterdam's legal mushrooms and felt a cappuccino's head of foam rippling and exploding against my upper lip that I really understood why they froth the milk on a cappuccino.

Did you pick up any diseases while abroad?

You name it, I've had it. Dysentery to the point where I'd lost 1/3 of my body weight (I'm 5'8" and I was down to 90 pounds at one point), Giardia, TB. Malaria, which hit me while I was in a pygmy camp in Zaire. The ongoing attacks I get from this are not so bad. One time I woke up in Paris during a snow storm and was hallucinating vividly. The flakes were all huge purple and orange globes. Lovely. Various unknown diseases that turned my tongue black, covered me with red dots...

Do you think coffee will ever come under scrutiny as a controlled substance?

There are actually quite a few people out there that think caffeine might begin to get the same treatment that nicotine is currently getting and I suppose it's possible. There's definitely an increase in corporations being "concerned" about what "their" workers do to their bodies. I can foresee people being ordered to get counseling for their coffee habit, etc.

When did you realize that you were addicted to coffee?

Oh, it would have been while driving across the US. At one point, we drank so much bad coffee that we got physically ill. When I decided to cut it out I became exhausted and mildly depressed, headaches, etc... I was perhaps 20 at the time and have never again considered going cold turkey.

So no plans of ever giving up this sinister brew?

I would rather die. Coffee and the red wine of Chinon make life worth living!

Edible Light

excerpt by Thomas Riedlinger

Thomas J. Riedlinger, M.T.S., F.L.S., is a former associate in ethnomycology at Harvard Botanical Museum and a fellow of the Linnean Society in London. He earned his bachelor's degree in psychology from Northwestern University, and a master's degree in world religions from Harvard Divinity School. His published works include *The Sacred Mushroom Seeker*, a book of essays on ethnomycologist R. Gordon Wasson, as well as articles in *Gnosis*, the *Journal of Humanistic Psychology*, the *Journal of Psychoactive Drugs*, the *Journal of Transpersonal Psychology*, *Medical Hypotheses*, *Psychedelic Illuminations*, *Psychedelic Monographs & Essays*, and *Shaman's Drum*.

The following is an excerpt from his forthcoming book, *Edible Light*, an account of how the author used entheogens as part of a long quest to learn why God, if assumed to be powerful and good, either willfully made or tolerates evil and suffering.

The turning point for me was a life-changing vision I experienced on LSD in 1968, at the age of nineteen. I was then in the U.S. Air Force and training to work as a North Vietnamese language specialist. When I confessed to taking LSD my case was referred to the Air Force's Office of Special Investigations (OSI), which directed that I should be classified as "human unreliable" for four years. One consequence of this was that I could not go to Vietnam. Instead, I was reassigned as an administrative clerk to Wurtsmith Air Force Base, located about two hundred miles north of Detroit in the town of Oscoda, Michigan. From 1969 through the end of my four-year enlistment in 1972, I lived there happily with my then-wife June and our new daughter Jenni. The only significant dark cloud during that period was the death of a close friend, Mike Collins, who had given me the LSD I took in 1968 - my first psychedelic session.

.....

Though I had told the OSI that I planned never again to take LSD or other psychedelics, my resolve not to do so was merely expedient. In addition to wanting to stay in the Air Force, I did not know anyone other than Mike who had access to these substances; it therefore seemed unlikely that I would be tempted. But in the months immediately following Mike's death, I began making friends with a number of airmen and civilian neighbors my own age, many of whom had access to a smorgasbord of recreational drugs being brought to Oscoda from sources all over the world by way of Detroit. Included were lots of low-potency marijuana, "blond Lebanese hash," psychoactive mushrooms, synthetic psilocybin, peyote buttons, synthetic

mescaline, and various forms of LSD, including purple haze, orange barrels, blotter acid, windowpane, and sugar cubes. My interest in trying psychedelics soon returned and I began to sample all of them. If heroin, cocaine, and other "hard drugs" also were available, I was not aware of it; they did not appeal to me or my friends in Oscoda. What we sought from psychedelics was essentially the opposite of what those other drugs provide. We did not wish to feel numb, sedated or delirious. Rather than escaping from reality, we wanted to perceive it fresh and new again - "appareled in celestial light," to borrow Wordsworth's phrase - the way it looks to all of us in childhood before habituation dulls our senses. Psychedelics have the power to restore that faded vision to its former full intensity for several hours, and by doing so remind us that the world is suffused with miraculous beauty in addition to the violence, brutality and ugliness it harbors.

Between the winter of 1970-71 and January 1972, when I was honorably discharged from the Air Force, I ingested psychedelics about thirty times, almost always on Friday or Saturday evenings and usually accompanied by three to ten fellow travelers. The general mood of these gatherings was festive yet decorous. Everyone treated each other respectfully, talking or listening quietly or with joyful animation, often laughing, sometimes weeping, at other times sitting alone with eyes closed, enraptured by marvelous, colorful visions. Only rarely did anyone have a bad trip, and the antidote administered to those who did never failed to work: we talked them down with expressions of honest concern and uncritical love. It has been said that psychedelics are community-building substances, in contrast to drugs such as heroin and cocaine that encourage acquisitive



Illustration by Thomas Riedlinger

spring 2000

self-absorption. Based on what I have experienced and seen there is some truth to this. Psychedelists who are not also alcohol or polydrug abusers just seem to be more genuinely open to appreciating other human beings. They also commonly report increased respect for life in general and greater ecological awareness.

As for spiritual enlightenment, my psychedelic sessions in Oscoda did not delve as deep as what I had experienced the first time I took LSD. This was mainly due to differences in dosage, set and setting. I discovered that I like my psychedelics in low doses, seldom greater than the functional equivalent of 100 to 125 micrograms of LSD; often I only took half that amount. Additionally, my mindset toward religion had been compromised by Mike's untimely death. While this did not convince me that I should abandon my spiritual quest, I now see that it made me defiant toward God and less open, therefore, to spiritual ideas. Finally, the psychedelic sessions in Oscoda had a focus best described as recreational rather than specifically religious. Consequently, few of us reported having mystical experiences. We did, however, find that over time we identified less with mainstream organized religions and more with what we vaguely called "spirituality" - a pantheistic worldview inspired by our use of psychedelics. Every leaf on every tree, each blade of grass, all birds and insects, every mammal, every fish, all people everywhere, it seemed to us, were sacred; life is holy. Our cathedral was the living world. Why then go to church? From this perspective I considered Christianity to be a kind of death cult. "They believe that Christ was crucified, died and was buried; on the third day he rose again from the dead," I reminded my friends. "His resurrection is supposed to matter most. But then they symbolize their faith with little images of Jesus dead and nailed to the cross! That's pretty morbid, don't you think?" My friends agreed. It would be years - a quarter century, in fact - before I recognized a fundamental error in my criticism. Until then I remained antagonistic toward

my former faith tradition.

Upon leaving the Air Force in January 1972, I moved my family 125 miles southwest to the city of Mt. Pleasant, where June and I enrolled as full-time students at Central Michigan University. Though I proved to be a somewhat more disciplined student than I had been during high school, I still lacked motivation and earned only average grades. Part of the problem was that there were many distractions on campus, in particular an active counterculture. After four long years of self-imposed repression in the Air Force, I welcomed this greedily, joining the antiwar movement and drawing cartoons for the underground newspaper, *Mountainrush*. I also continued ingesting psychedelics at least weekly, under circumstances similar to those in Oscoda and with similar results.

In the final days of 1972, we moved again, to DeKalb, Illinois, a small city surrounded by farmland about fifty miles due west of Chicago, where I took a job as a gas meter reader while June continued pursuing a bachelor's degree in biology at Northern Illinois University. The energy that I had been investing in my college studies needed a creative outlet. At first I took to reading Sartre and other existentialist philosophers more earnestly than ever. This did not make me smarter but I did become pretentious, even naming our new German Shepherd puppy "Sartre" over June's understandable protests...

For most of the two years we lived in DeKalb, I experienced a subtle but very significant change in the quality of my psychedelic sessions. I became more introspective for increasingly long periods while tripping, even with friends, and simultaneously started sketching pictures. My technique was to confront a large sheet of blank drawing paper during the peak of a session. With no preconceived notion of what I intended to draw, I first made random, sweeping marks with a well-sharpened No. 2 pencil. Eventually a pattern or conceptual theme emerged, often linked to some quote I



remembered from literature. After that I just filled in the details during the rest of the session and for days or sometimes weeks afterward. Most of these pictures, I realize now, express unconscious psychodynamic material: sexual guilt and repression in *The Puritan Ethic* (page 54, top); defiance and rage in *Invictus* (page 54, bottom); and alienation in *Convolution* (page 51). The last drawing in the series and the only one rendered in color was *Reincarnation* (page 53), completed in the fall of 1975. When Stanislav Grof later asked my permission to publish it, anonymously, in his book *Beyond the Brain* (1985), I provided the following background information in a letter to him:

The model for the little girl was my daughter Jenni, then five years old... [The] general concept was inspired by two stanzas from Edward Fitzgerald's translation of "The Rubaiyat of Omar Khayyam," an old Persian poem:

I sometimes think that never blows so red
The Rose as where some buried Caesar bled;
That every Hyacinth the Garden wears
Dropt in her Lap from some once lovely Head.
And this reviving Herb whose tender Green
Fledges the River-Lip on which we lean—
Ah, lean upon it lightly! for who knows
From what once lovely Lip it springs unseen!

However, the Rubaiyat's tone is nihilistic, and I feel that *Reincarnation* makes a positive statement.... The drawings that preceded *Reincarnation* were all black and white. They dealt with images and themes that I now recognize as manifestations of unconscious negative feelings. If I remember correctly, *Reincarnation* began in this mold; it was intended to illustrate faithfully the concept and mood of the Rubaiyat — i.e., a nihilistic statement. But during the 100 hours it took me to finish the drawing, my attitude changed, possibly due to the fact that I used psychedelics at least twice in that period and worked on the picture while under their influence. At any rate, I altered my original bleak conception to include vivid colors, the girl, the numinous aura surrounding the head of the corpse, and a visual pun (the flower that springs from the grave is a carnation).... I think it represents my hope of someday finding some transcendent value that will vindicate my death.... The flower is the symbol of that hope. Perhaps it also represents the transmission of values from one generation to another, or the joining together of opposite realms — the conscious and unconscious, Eros and Thanatos, matter and energy — in a dynamic relationship. All those possibilities ring true to me.

Grof had asked me to explain the picture's meaning, but I did not know myself what it actually meant and so offered the foregoing possible interpretations. In truth, I now believe, the transformation that the picture underwent between conception and completion was a signal of my readiness to move beyond psychodynamic concerns to deeper levels of the unconscious. This is not to suggest that my psychodynamic concerns had been totally resolved. I still was haunted, and still am today, by painful memories of my childhood. But my consistent use of low-dose psychedelics over time in DeKalb and Oscoba, among friends and in comfortable settings, encouraged me not to repress these recollections. By acknowledging them I was able, at least, to reduce their invidious power to compel my behavior unconsciously.

For example, late one evening during this period, I took a standard dose of LSD and stayed up by myself until dawn in the living room of our apartment. June and Jenni both were sleeping, unperturbed, in their respective bedrooms; I could hear the gentle cadence of their breathing. At daybreak, it seemed that the room did not brighten with inflowing sunlight so much as the air color changed, from charcoal gray to pale yellow with a warming saffron tint. Seldom have I felt so contented and comfortable. I closed my eyes. A little boy was waiting in the darkness, sitting cross-legged with his shoulders slumped: myself, about seven years old. How tired he looked; how hopeless and sad. Then he turned his eyes toward me and brightened. "Thank you, Tom!" he said, enthusiastically. I thought of June and Jenni sleeping peacefully nearby. That is what he was thanking me for: his broken family had been repaired. "You're welcome, Tommy," I replied, feeling very self-satisfied. It seemed that I had reached some kind of closure regarding my family issues. And to some degree I had. My daughter's home environment was different from mine as a child. I did not physically intimidate nor verbally abuse her. I encouraged her to be expressive rather than subdued, and took an active role in educating her. She never doubted that I loved her. To that extent I had gone far toward transcending my childhood woes. But I failed to recognize one major issue still lurking, unnoticed, within my unconscious: a deep-rooted fear of abandonment. It was this that informed my initial conception of *Reincarnation*. The roots reaching down and away from the world of light represent my abandonment fear. They are entangled, deeper down, with fear of death. And death itself — the casket containing a skeletal corpse — is embedded in earth that resembles a cosmos. I was poised, but did not know it, on the verge of a descent through all these stages that would prove to be my personal experience of hell.



**drug-crazed punk rock anarchist freak
hippy cyber-whore foul-mouthed
zeitgeist-chasing paradigm-busting
media-slave proto-slacker wannabe
hacker futurist and propaganda spouting
political manifesto writer of trash
amateur pornography omniscient
multi-dimensional entity
shamanic lord of time and space
presumed to be armed and dangerous
on the loose in a galaxy near you...**



RU SIRIUS?

INTERVIEW WITH R.U. SIRIUS

by Malvolio Rutteledge

Scion of Yipple, cultural progenitor of Cyber, R.U. Sirius (aka Ken Goffman), former editor of the seminal Mondo 2000 magazine, has reified into a prankster politician running for President of the United States. Lately, he has been publishing his political platforms on the firebrand, Disinfo.com, where one may read his screeds in Dissent. His purview of culture and politics tower over most robotoid stooges with hefty lobbies behind them, but WILL HE WIN? Does his ability to speak lucidly and without trite cliches, and honest intelligence, preclude his presence in the White House? Will any of us get out of here alive?

In "Revolution '5" on Disinfo.com, you wrote, "The truth can now be told... the United States is a police state..." How far ranging do you think the drug war has become in orchestrating the bulk of current U.S. troubles? Do you feel that the suppression of cannabis and other entheogens is really the major political lynchpin that libertarians such as Dick Cowan would have us believe? We're talking vested interests here...

I consider the drug war to be a bigger disaster for America than the war in Viet Nam. In terms of the destruction of our civil liberties, the evolution of a prison/industrial complex, some five and a half million people in prisons... so that now there's a vested economic interest in incarcerating people, the majority of them for drugs... the McCarthyism of ubiquitous drug testing, the seizure of property without trial or conviction, just on and on. The question I have is where are our Berrigan brothers? Where's our Doctor Spock? Where are the religious persons of conscience spilling blood on files in the DEA offices? They've got something like 30% of young black males now in the criminal punishment system, the US is being denounced by Amnesty International because the prisons themselves are torture chambers. Where's the peace movement?

Why are prisons and entertainment the only growing U.S. industry?

Well, we're the first post-industrial state. Leisure, play, amusement, those are the would-be industries of the future. Prison is a kind of enforced leisure I guess, in a weird sort of way.

You wrote that most Americans find the current totalitarian state passable as long as they are not directly involved with it. Just how totalitarian IS the United States?

Well, you don't see any great uprising do you? I mean, they're searching our urine! On a certain highway outside of Austin, Texas, on random days, they just pull everybody over and search their cars for drugs. You're supposed to be able to refuse to have your car searched without reasonable cause, but the Texas judiciary in its wisdom has figured out that refusing IS reasonable cause. There's an institutionalized Catch 22 right there in Texas but don't ask don't tell anyone.

Professor David Marc wrote in "The Bonfire of the Humanities" that the current drug prohibition is aimed at the lower class and the middle class because the government "doesn't want people too stoned to go to work." Do you agree?

I think it's one element of a confluence of reasons. The illegality of drugs is a huge industry. I'm sure when Nixon escalated it into a war, it was at least partly about budgets... who gets to have a project and get a bunch of money. The DEA... the various arms of law enforcement and the justice system involved in that particular area. And then there was just the cultural hostility towards the underclass, towards blacks and, particularly in its origins in 1968, against hippies and the "new left." Finally, there's the black budget profits that are gained by keeping the pleasure drug industry in the shadows.

I often look at photos of the drug czar and wonder what is in that guy's head. What is in that guy's head? He obviously believes in state obscurantism...

He doesn't look much like a Czar, does he? What's the story with General Barry McCaffrey? He seems smart and yet he says such dumb things. Does he know any better? We know Bill and Al know better. It was probably politically expedient for them to choose somebody who was totally clueless when it came to drugs.

What role do you see sociobiology playing in future organization of society? Edward O. Wilson's work at one point was regarded (and possibly still is) as quite heretical in that it posited an almost completely deterministic conception of the human species. It's interesting how this could tie in with Huxley's satire on society, *Brave New World*.

I've just been re-reading Edward O. Wilson's *On Human Nature* and it strikes me as much more poetic, humane and sympathetic the second time through. I find it amusing that some humanists are offended by the notion that there's any connection whatsoever between human societal organization and behavior and animal societal organization and behavior. Talk about human chauvinism. It's weird when you talk to people whose opinions on science and the nature of things is dictated by political comfort, so that exploring the biological roots of behavior becomes verboten. That's weird. Don't even look over here. Don't think about this. Umm... Animal Farm, yes.

How do you feel about voting?

Nauseous. Actually, I want people to vote for me. I've started the new political party, The Revolution, and I'm our candidate for President! Just say R.U. Sirius, the only response to the other candidates. In all seriousness, I think if we non-authoritarians voted, we could form a power block that would provide a countervailing influence to the right wing moralists and also help to break the Republican two-party hold on the political process.

Can you define the political platform of your Revolution party?

I would define it as 21st Century Humanist Libertarianism, or damned near something like that.

If you were elected president today, what would your first domestic and foreign policy decisions be?

My first domestic policy decision after ordering up pizza

The commercial rave scene has spread psychedelic experimentation and thinking among youths like nothing since the hippie culture in the sixties, but I'm not personally interested.

would be to pardon all federal prisoners in for non-violent drug possession charges and all prisoners listed with Amnesty International. My second move would be to stop providing all the arms to pretty much everybody globally...

In your opinion are there any grey areas at all between anarchy and authoritarianism, and if there are how can we ever hope to achieve a happy medium?

Absolutely. I'm not an anarchist in any absolutist sense. I think the Jeffersonian tradition as reflected in the US Constitution and the Bill of Rights is plenty anti-authoritarian. We've never lived up to those principles.

What do you think is the most dangerous thing about the Internet?

Ubiquitous decentralized media more or less destroys social consensus, destroys consensus reality, by dispersing attention. This is on the one hand desirable, but it's also problematic. You can't bring people together too easily, for instance, to make social change.

Do you think WebTV will catch on? It has been claimed that it could revolutionize the world. For example, in China, where the state controls most media, if all you need is a TV and a keyboard you could access the Internet. Still, one does not hear much about WebTV. Predictions?

Eventually, there will be a medium that will allow individuals to upload video, both tape and live, so that individuals will be able to broadcast materials at the same level of quality that we're accustomed to. Will it revolutionize the world? I think in some sense, the utter decentralization of public media and public discourse devolutionizes the world, but in an interesting way. We can no longer locate a consensus reality to subvert. The only thing that would revolutionize the world would be production technologies that overwhelm scarcity. The first step toward that is anything that will end our reliance on oil. I'd say we have a few years — less than a decade — to make a complete transition from oil usage — if we're lucky. Probably, it's already too late.

After spending the early 90s at Mondo — ground-zero of the whole cyber-psychedelic rave-culture explosion — what do you think of the shape of that particular scene today? What do you think the next big wave of countercultural revolution will look like?

The commercial rave scene has spread psychedelic experimentation and thinking among youths like nothing since the hippie culture in the sixties, but I'm not

personally interested. Smaller private rave gatherings are still pretty nice. It's almost become the assumption that an opening for a new hip magazine, or even a sugar saturated beverage trying to appear hip, will have a rave party for their opening. It's ubiquitous. I don't think we can talk in terms of counterculture anymore because the consensus reality that counter would be counter to is so confused and dispersed. I think we'll see more and more subculture. But I also think that people who like to mind their own business will get political for obvious reasons of self-protection...

Ubiquitous decentralized media more or less destroys social consensus, destroys consensus reality, by dispersing attention. You can't bring people together too easily to make social change.

What was your overall experience as editor for Mondo? Seemed like a cool position to be in.

Mondo was the biggest fun of my life. When it was in its groove for a couple of years, it was a pleasure to be part of it. There weren't really any office rules, and yet we made it work. I could smoke DMT in the living room on a work day, if the moment seemed right. I haven't been able to find another job like that!

What do you think of Wired magazine? It seems like a giant hoax to me. Like George. A yes-man club of a few yuppie technophiles. What are your favorite magazines? Do you like Hustler?

Wired was interesting early on, when it explored some topics in depth. But Wired was a safe corporate clone of Mondo 2000, and the current Wired is an even safer corporate clone of itself. The early Wired was, at least, an authentic project of genuine technophiles. The current Wired is being done by professional journalists, people with no connection to technoculture — people of no vision who laughed at the notion of cyberculture before it became mainstream. I like *Pop Smear*, a very hip and funny sort of tabloidesque semi-pornographic zine out of New York City. And I like *Mean*, which is a very well-written sort of subculture/pop zine. *Hustler* doesn't really have much in terms of interesting content, although I like pornography in general. I prefer *Club International* as far as straightforward semi-gynecological photos of distortedly silicone-based hyper-sexualized young women are concerned. I liked *21.c*, a technoculture zine out of Australia that straddled the line between academic and pop, but now that's gone.

What authors are you currently reading? Why?

I'm finally reading Neal Stephenson's latest book. I read a chapter from it that was published in *Time* and thought it was great. I've been recently devouring whatever Bruce Sterling novels I hadn't already read. I think his most recent work, *Distraction*, is amazing. And I'm reading this book called *BOGGS: A Comedy of Values*, by Lawrence Weschler. It's about this artist who paints money and trades the paintings at the value he puts on the money for goods and services. In other

words, if he paints a \$50 bill he convinces someone to take it in trade for \$50 worth of whatever...

Do you like Ketamine?

I like Ketamine mostly because it doesn't last very long. If someone would come up with an LSD or a psilocybin where you could peak in a few minutes and be completely done in an hour-and-a-half, that would be just as good. But Ketamine, I think, gets you to your core address. It gives you the perspective of distance, but with a weird technological edge.

In "The Scientist", Lilly had a vision on Ketamine where he went into the future and saw all the cars running on water vapor. I saw a week ago in the news that Chrysler-Daimler-Benz revealed a car that does just that and will be available for purchase in 2004...

I definitely believe that scientific and technological solutions present themselves in psychedelic experiences.

What kind of new technology have you been using or like?

I'm not that much of a user of technology. Like William Gibson, I follow technology and its cultural significance. I leave the hacking to others. I like the whole MP3 thing though. I really want there to be a global jukebox attached to some kind of machine. I put in my credit card or my ATM card and for say \$1 I can hear any album that was ever recorded. Once I've picked that album say 15 times, I own it and can listen to it any time I want.

A friend of mine bitterly claims that the TV he watched as a child created archetypes in his mind that will never go away. Do you think that's true? I mean, there is the use-it-or-lose-it law of mental processing, right?

Ward, I think it's time to have a few words with the Beaver. He sounds like he's on drugs or something.

Quis custodiet ipsos custodes?

Sure I'll have custard...

MY OBSESSION WITH DOWNTEMPO

by James Kent

When I was younger I used to listen to a lot of Rock & Roll. I grew up in the age of disco but I always preferred rock — Zeppelin, Floyd, Sabbath, Hendrix — even that bad pop metal that was huge in the '80s. In the early '90s my tastes inevitably turned to grunge and some of the better alt-rock, but before long I got turned on to techno, house, and other forms of electronic music and suddenly it was all over for Rock & Roll. Back in those crazy '90s I went through hip-hop, dub, ambient, jungle, trip-hop, house, and hardcore in just a few years, but none of those styles grabbed me and held me like my latest and greatest musical fixation: downtempo.

It may be a sign that I am mellowing out a bit, or maybe it is because I now have a small child in the house, but lately I have been listening to nothing but downtempo — it's all I want to hear. Downtempo is a musical style that seems simple on the exterior but is actually very complex when you dig into it. At first pass it may seem like acid jazz, mellow electronica, or slimmed-down drum & bass with a chill groove, but it is more than any of those descriptions. Downtempo is the first real lounge music of the new millennium, the smooth jazz of the year 2000. Unlike darker downbeat styles like abstrakt, illbient, or trip-hop, true

downtempo does not sway into the macabre or dive deep into melancholy. Good downtempo does not want to be 'in your face' or 'emotionally charged' but instead aspires to be the ultimate holy grail of all chilly chill-out music. It is the gently thumping stone groove of pure leisure, the luxury of enjoying life, the soundtrack for rollin' on by with your arm hanging out the window and a big old smile on your face.

Yes, downtempo is music to *relax* to. It is great music to have playing in the background while working, reading, meditating, driving, taking a bath, having sex, hanging out with friends... But don't get me wrong, this is not elevator music we're talking about here. Downtempo is a strange combination of ritual trance, hip-hop, and modern electronic beats layered with soothing jazz, funk, R&B, and pop melodies. Good downtempo is like a velvet funk for the inside of your head: it's soft, lush, rich with warm tones and all sensual to rub up against. Who could ask for more?

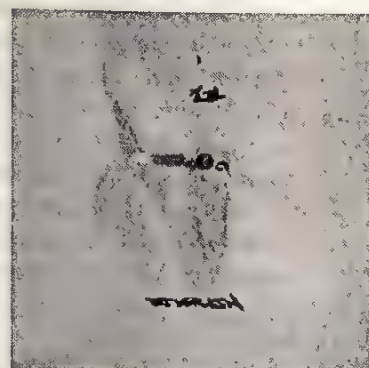
One of my downtempo staples over the last few months has been Kruder & Dorfmeister's *The K&D Sessions*. Kruder & Dorfmeister are a pair of producers from Vienna, Austria, and are widely considered to be the chilliest groovemeisters in all the world. Their



Kruder & Dorfmeister - *K&D Sessions*
G-Store Records



Various Artists - *Om Lounge*
Om Records



DJ Krush - *Kakusei*
Red Ink

Trademark G-Stone style has all but defined the downtempo genre, and if you are at all interested in learning more about downtempo I would highly recommend any of their albums. The *K&D Sessions* is a double CD on which K&D remix tracks from Depeche Mode, Lamb, Bone Thugs 'N Harmony, Rocker's HiFi and many others. This two-disc set is a great introduction to the downtempo style, is consistently sweet and mellow, and has a lot of different influences to keep it interesting.

Another place to look to for the emerging chill beats is Om Records (www.om-records.com). I have had a compilation of theirs called *Om Lounge*² in very heavy rotation in my CD player lately. *Om Lounge*² has 14 great tracks from various artists – including Soulstice, J-Boogie, and afro-mistyk – and there is not a bad track in the bunch. I have come to expect great things from Om Records and again they did not disappoint. Om is known for producing great psychedelically influenced mood music, and their compilations *Mushroom Jazz* and *Altered States of Drum & Bass* are also filled with mind-melting grooves and hyper low-down funk. They have also just released *Om Lounge*³ which I am very anxious to check out. I would highly recommend any of Om's compilations as a good way to learn more about their particular style. I'm sure you'll find what they do pleasing to your ear.

For those of you looking for more experimental downtempo I also highly

recommend DJ Krush, a longtime Japanese B-Boy making a big name for himself worldwide. Krush has put out a handful of interesting and unique albums all toying with the boundaries of hip-hop, acid jazz, and trip-hop. His latest outing, *Kakusei*, is a bit more

where you can also find *Afternoon Nap* artists and play list info. The *Afternoon Nap* is a good place to check out what downtempo is all about, and if you like what you hear I urge you to go out and support the artists who are making this music possible.

I'm genuinely surprised that downtempo is not more popular right now. It is mellow enough for anyone to enjoy (even straights and old folks) yet

it is deep and altered enough to make guided headphone journeys a blissed-out treat. You would think every radio station in America would be slipping some downtempo funk into its rotation, but with the rare exception of a few indie stations it is still only found in the DJ music underground. Some music critics may dismiss downtempo for its deliberate airiness and seeming lack of

depth but I think that kind of analysis really misses the big picture. There is as much depth to serenity and leisure as there is to rage, melancholy, or any other emotional extreme. I guess I've just outgrown my rage and melancholy and have cultivated a greater appreciation for peace and serenity in my life. How about you?

Would you like to know more? You can find more reviews and pointers to great sources for underground psychedelic music at the TRP website:

<http://www.resproject.com>

Good downtempo
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dramatic and risk-taking than his 1997 solo album *Meiso*, but it is well worth having in your rotation for the truly dope beats and eerie textures Krush puts together.

And finally I'd like to mention a cat named DJ Dusty who has been streaming a great downtempo show called *Afternoon Nap* over the internet for quite some time now. If you have an internet connection and an MP3 player like Winamp, RealPlayer, or Windows Media Player, you can pick up the *Afternoon Nap* stream at the Shoutcast homepage (shoutcast.com) or at Dusty's site (downtempo.org)

DOWNTEMPO.ORG

REVIEWS • REVIEWS • REVIEWS

**Afro Celt Sound System -
Volume 2: Release
1999 Real World**



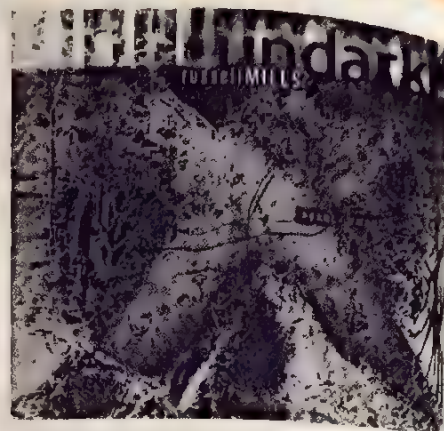
I've had the pleasure of seeing the Afro Celt Sound System in concert twice: last year at the WOMAD Festival in Seattle, and later that year at the Showbox in Seattle. The live band consists of a core group of seven people, giving off some of the most joyous live vibes I've experienced. It's clear these people truly enjoy the hell out of playing live, and they put on a completely high energy show, combining manic techno beats with intense African percussion and Celtic melodies.

Their new album, "Volume 2: Release," nearly manages to capture that live energy, and definitely offers as rich a listening experience. I have to confess a severe amount of ignorance when it comes to both traditional Celtic music, and traditional African music. Like many Americans, my forays into what is laughably called "world" music are limited; often times I like what I hear but have no idea what it is exactly I'm listening to. The magic of the WOMAD Festival the past two years has been the exposure to a vast array of modern and traditional sounds, and the Afro Celt Sound System represents a thoroughly unique fusion of these sounds.

From the opening track "Release," which features the guest vocals of Sinéad O'Connor, the pulsing undercurrent of the music is in charge and essentially never lets up. The combination of heavily programmed techno beats, and the live sound of the talking drum, the djembe, tablas, and other percussion, is the foundation upon which a blazing mixture of uilleann pipes (similar sounding to the bagpipes), flutes and whistles, guitars, and keyboards are laid down. The vocals of Iarla O'Lionáird and N'Faly Kouyate permeate the mix; O'Lionáird's solo album "The Seven Steps To Mercy," also on the Real World label, is a much more sublime affair compared to the intensity of the vocals and the beats on this album.

It's hard to say if "Volume 2" is much of an improvement on the formula the band created with their first Real World release, "Volume 1: Sound Magic." Rather it seems an extension of a formula that is itself unique enough to warrant two such similar sounding albums. In concert, we began to feel as though we were hearing the same song more than once by the time the end of the shows drew near, but that wasn't necessarily such a bad thing, because we couldn't help but dance our happy asses off to the strange and wonderful fusion they'd created. Overall, if you're a fan of the first album, the second one is definitely worth a listen, and if you haven't heard them before, "Volume 2" is as good a place as any to become familiar with this remarkable modern "world techno" band. —*Scotto*

**Russell Mills/Undark -
Pearl + Umbra
1999 Bella Union**



Those of you who remember the dearly departed ambient label em:t may remember Undark; their release on

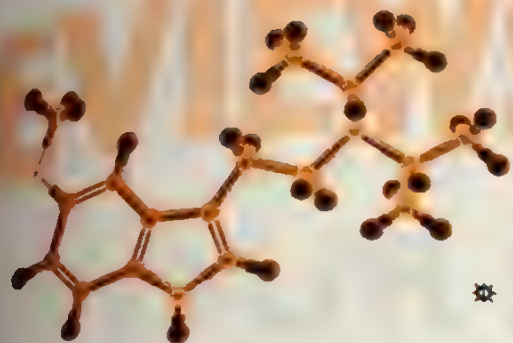
that label was a study in eerie, churning ambient, held together by a certain classic kind of restraint. Now Undark has a new label, Bella Union in the UK, and a new CD release, "Pearl + Umbra" that by far wins my award for best ambient techno release of 1999.

Just reading the list of "guest artists" on the back of the CD case is enough to practically make a person swoon: the list of contributors includes Robin Guthrie of the Cocteau Twins as a principal collaborator (on sonic mandarin, of course), and the album also features contributions from Michael Brook, Harold Budd, Brian Eno, Roger Eno, Peter Gabriel, Bill Laswell, Thurston Moore of Sonic Youth, Hector Zazou, and about a dozen others. Rumor has it that the process of creating the album involved these individuals sending raw sound to Mills for him to manipulate and build the album around, but in many cases it's clear the contributors are actively engaged in making some fantastically dense and complex techno.

The album opens with "Canyon: Split Asunder," featuring a determined beat right out of the gate, and weaving a multitude of voices in and out of the mix in an eerie and unintelligible fashion. "Swallow Crystals" sounds like some weird transdimensional machine, with gears that generate wild beats and insane swoops of sound over a menacing bass line. On "Room Of The Sixteen Shimmers," guest vocalist David Sylvian—someone who normally irritates me to no end—provides a silky and insidious vocal that perfectly complements the dark groove Mills has created. "All Wise Fly (Pneuma)" offers a reckless horn section on top of a disturbing back alley beat, a beat that seems to reverberate against abandoned buildings at night. With "A Swoon In Amber," we're taken on a spooky trip through an underground cavern, where hidden societies hide, and on "Heaven Dips," we come perilously close to a weird religious chant and ritual. By the time we reach "All Wise Fly (Grapes And Bones)," the horns have taken us deeper into the underground, eventually finding the source of the beat itself in an insane hall of cyborg sound.

All right, maybe that's slightly metaphorical.

The point is, this album is incredibly lush, very intense, and is a definite improvement over Undark's earlier em:t release. There's an aggressive drive to this album that never overwhelms, but instead generates a sense of eternal motion. As grooves appear and disappear, it's obvious they are simply making themselves available to us on a temporary basis before sliding back into their home dimensions. —*Scotto*



Exotic Substance Review

5-Meo-DIPT (N,N-Diisopropyl-5-methoxy)

I've had two experiences now with 5-meo-DIPT, once at the 20mg level, once at 25mg. 5-meo-DIPT is being touted as "the foxy methoxy," and while cynical bastards like me are well aware that this is a Clever Marketing Ploy, the fact remains that there certainly are people who are digging on the sensual aspects of foxy.

My experiences with foxy have been rather enjoyable in both cases, though I didn't feel particularly "foxy" either time. Foxy to me is very much like LSD, except without the deep well of content that accompanies an acid trip. It's very visual, and very physical - my body vibrated with energy, and I was lucky on both occasions to be in environments which were good for hiking around and looking at interesting things. Sitting still or hanging out inside an apartment would, I imagine, be a drag on this substance, whereas going out dancing or hiking along a beach would be ideal activities. Intellectually I wasn't as stimulated as I am on something like LSD or PCP, but the pure physicality of the substance made up for it. The first time I took it, I found it extremely hard to communicate with my companion, but during the second experience, the same companion and I "hit our stride" so to speak and were able to communicate a lot more fluidly.

Foxy has what I would call a high body load. It leaves me feeling very taxed, and at the 25mg level, I was very nauseated for quite a while as I came on, having to stop several times, in fact, doubled over on the verge of vomiting. Eventually my stomach settled, though, and things moved wonderfully. At the dose level I was taking, foxy had an LSD-like arc in terms of duration and peak; it wasn't particularly easy to get to sleep afterwards.

We managed to run a number of experiments at various dose levels with foxy, and found that about half the time people loved it, and half the time people were annoyed by it. One guinea pig described it as "having all the annoying parts of acid without any of the good parts," while other people were blown away by it and had a wonderful time. In general, the more of the substance people consumed (heading up toward 20mg and above), the better time they had, but as always, this is not a rule but a limited observation and caution is in order. We know of a few crazy people who have ramped it up safely and enjoyably to rather high dose levels, but body load is definitely an issue. We also heard of a couple guinea pigs who combined foxy with LSD, taking LSD at the tail end of the foxy, and apparently had a marvelous time.

For me, I'm looking forward to trying it again at a slightly higher dose than before, and seeing if I get to a state with it where my intellect is as enraptured as I am told it can be on foxy. —*Scott*

Mother of Moth Delta 1999 DMT Records



"Delta" is the second EP from Mother of Moth, an all acoustic music project fronted by guitarist and vocalist Patrick Archie. While Moth's self-titled first outing was heavily influenced by hypnotic far east and Celtic melodies, the six tracks of "Delta" stay firmly rooted within the dark and muddy currents of psychedelic delta blues.

The Moth lineup is simple: Archie on guitar and vocals with a handful of support musicians filling in on slide guitar, harmonica, rudimentary percussion and digeridoo-like jaw harp. The lineup is as trimmed down as any blues ensemble you'd see stompin' its feet on a busy New Orleans or Baton Rouge street corner, but their sound is anything but typical. Using dark and hypnotic mixtures of minor blues riffs and cross-key harp and slide melodies, Moth whips up a psychedelic stew of Mississippi mud so thick it pulls you in and sucks you down like a lost weekend in a bayou opium den.

While "Delta" is nothing like Moth's previous work it is nonetheless a very satisfying evolution of their sound. With track titles like "Enoch's Blues" and "Golden Dawn" the occult influences in their work is obvious. It would not be far off the mark to refer to the sound of "Delta" as black-magic blues — and it is probably also true that God-fearing types would be quick to label it pure devil music — but beyond the drug and occult references both explicitly and subliminally layered into this album there is at the core a group of skilled and passionate musicians quietly aching to transcend the blues they play. It would have been easy for Moth to throw in a lighter tune on this outing — something uplifting or vaguely poppy — but instead they choose to eat the soul-swallowing swamp blues inside and out. Utilizing shuffling guitar rhythms and haunting melodies, "Delta" ultimately transcends the blues and becomes some kind of murky blues aberration, a type of black-tar blues pure enough to numb the deepest holes in your soul.

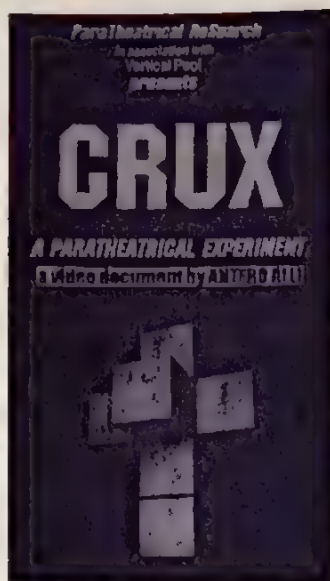
The only disappointing thing about "Delta" is that it only contains six tracks. It works its magic by pulling your mind down into a spacious bluesy grotto but then all too soon it is over. The two purely ambient tracks, "Golden Dawn" and "Smoke", are haunting and beautiful counterweights to the vocal and rhythmic tracks on the album, but they are short and ultimately leave the listener wanting more. A twenty-minute extended Mother of Moth live ambient-blues jam at the end of the album would be just the right fix to give it legs as a must-have classic, but as is "Delta" still remains a wonderfully mastered sampling of the darkest and most hypnotizing occult blues you'll find just about anywhere. —*James Kent*

CRUX - A Paratheatrical Experiment
A Video Document by Antero Alli
 1999 ParaTheatrical ReSearch/Vertical Pool

Crux is a unique documentary, a fascinating look into one of Antero Alli's paratheatrical research ritual labs (see article p. 16). Throughout fifteen rituals over five weeks, Antero and seven adventurous participants engage in a group ritual exploration of the crucifixion archetype. The ritual technology itself is non-dogmatic, based on technology developed by Antero and described in his book, *All Rites Reversed*. In this case, "crux" as a concept is a symbol for what each participant is living for, and "crucifixion" is a state of being that each individual must confront. At the outset of the video, Antero asserts that we are all crucified in some way to the cross of our existence - "a harsh perspective," he admits, but from that foundation, the group moves toward a rare and powerful form of catharsis.

To start, the participants assign themselves characters: Surch, Edgewise, Scatter, Mole, Slippery, Cage, and Proof. These characters seem to be archetypal expressions of the people playing them; the lab participants are not actors, but use method acting techniques to explore the "characters" of themselves. The rituals take place in simple black box theatre spaces, with standard black theatre boxes making a "cross" in a pool of light at the center of the space. The individuals come from diverse backgrounds: Surch is an anthropology student from Norway, Edgewise is a native of Scotland recently relocated to America, Slippery is an aikido instructor, Scatter is a musician, etc. They come together to explore a space that, for the duration of the ritual, becomes a sacred space, where a terrifying kind of freedom exists to explore and confront aspects of the self, and in doing so, encounter new truths about their lives.

"Crux," we are told, is a mountaineering term for the most difficult passage on the way to the top of a mountain. When faced with the crux, you can either turn back and return to base camp, successfully navigate the crux and ascend to the top of the mountain, or become trapped within the crux. In some way, each character in the *Crux* rituals faces the same dilemma as they move through this ritual space. For Edgewise, the crux is "trying too hard to be something, chasing the edge of existence." For

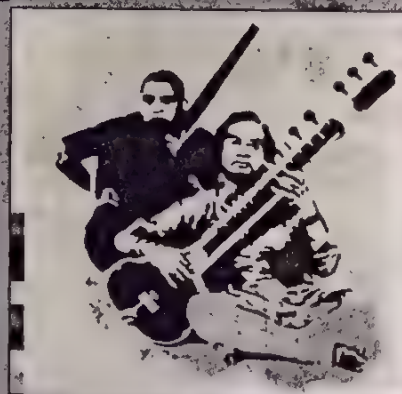


Cage, the crux is seeing "too much truth in too short a time" and finding herself pushed to the limits of "the surreal nature that reality has taken." For Slippery, the crux is being "nailed to the trickster thing." For Proof, the crux is "looking for the theorem that will explain me to myself and the world."

We are given tantalizing glimpses into the results this ritual exploration has on each participant: shots of insane, uncontrollable laughter; screaming, wailing, and writhing; wild movement and energy that seems to possess them at times. The video is narrated by Antero and the participants themselves, partially in interviews, partially in voiceovers taken from the participants' lab journals, and we see just enough of the rituals to know that something powerful is at work, without ever quite seeing the techniques that got these

people to such rare spaces. Unlike Antero's earlier video on the subject, *Archaic Community*, this video is more concerned with the stories of the characters, and less interested in demonstrating techniques that are already shown and described elsewhere in Antero's body of work. The pace is slow and dreamlike, allowing the viewer to drift in and out of direct connection with these people and their journeys. Ultimately we're asked quite directly: What are you living for? Where and how are you crucified? For those who regularly ask themselves these or similar questions, *Crux* is a remarkable look at one more set of possibilities, one more set of tools to apply to the ongoing process of self-awareness. —*Scotto*

Walking On



"My dream is to break barriers... through music, love, affection and compassion. When we are all here we are one, and when we go out I am sure we will all be one."

Ananda Shankar
 (1942-1999)

The Ananda Shankar Experience and State of Bengal

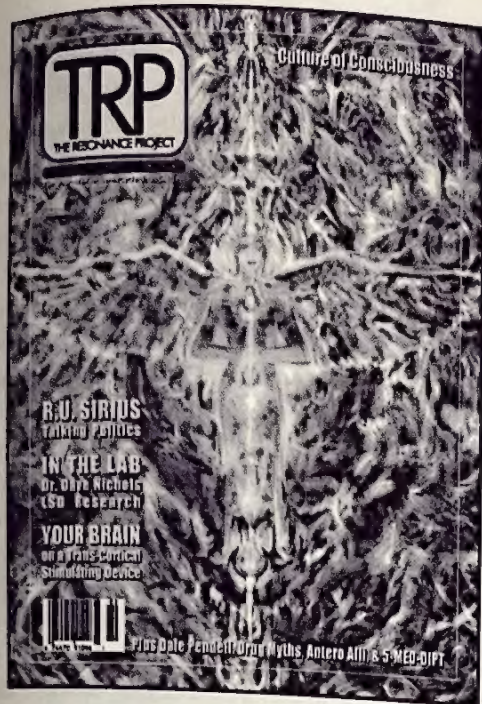
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To The Association: An Apology and Withdrawal

My apology to the Association will be short and to the point. I can no longer pretend to uphold the virtues so indicative of the fellowship of my peers.

The experiment was simple and well-known; many reading this now have completed it successfully. The Barkerson-Zsavaldi flux synthesis [Barkerson-Zsavaldi, 255] tank, fully filled with the proper bioelectrical gel, was attended by myself and one post-graduate student aide. The bioelectroflux was set in motion as prescribed in the texts, and small globoid systems began to form within the hour. Within three hours of full globoid formation — as expected fully from the outset — the 'ruptors began to manifest from within the fringes of the globoids.

To put it plainly, I was aware of the technical details of what was expected to occur, but I was not prepared for the ferocity with which these supposedly non-living systems devoured themselves. The process, of course, did not begin until the globoids had started to develop and extend reluctant tendril-sensors, none of which had the time to find another; within the initial moments of reaching, the 'ruptors triggered. As per the experimental data and hypothesis, not a one of the globoid-systems had time to react in any way to any other, regardless of proximity. This, perhaps, made matters worse for me. If a globoid or two had only been able to make contact, respond to its apparent environment, it might not have been so horrible a spectacle. But, as per the data and hypothesis, each globoid slowly turned in on itself, just as their tendrils were beginning to grasp beyond their borders, just as some neared utterly the aborted points of contact. Within one globoid, the 'ruptors cropped up like spontaneous little flaws in the smooth and fluid fabric of its walls. We had a good chance to look into the microscope at one such 'ruptor, and I believe it was perhaps here that my mind snapped altogether.

Tiny little rifts formed, rending the delicate and pulsing fabric of a fractional area of the globoid. The edges of the rift itself shivered with tiny little gnawing and writhing teeth-like tendrils, and each of these tendrils had a thousand-million threaded spiny incisors. As the supple fabrics and roils of the globoid were sliced through, I saw momentarily in my mind the image of a soap-bubble bursting utterly with threads of decay, as if turning suddenly to smoke. This is what happened to the globoid wall. As the tissue frayed and splayed open, tell-tale whisks of lustrus [Snodson, 44] shimmered away into the surrounding plasma. I stepped away from the microscope at this point, shaken but prepared to take my notes. Then I saw the rest of the tank. It seemed to quiver, and then all at once it broke into a multiplied but self-contained riot of frenzy. I stepped the microscope back a few thousand times, and gazed at one single whole globoid. It was slicing and ripping itself asunder — or rather, the 'ruptors were doing their job, setting up tiny fluctuations in the flowing of the globoia, which then billowed into the clawing cacophony previously seen up close. In every case, in each globoid, this seemed to happen all-but-simultaneously. All at once the tank had broken into its fevered gnawing and thrashing and rending. Slivers of globoia whisped away from their globoid in the tank. I began to weep.

I looked on, dazed, for the twelve minutes longer which had been perfectly projected by the data and hypothesis to remain before the entire cluster was utterly decimated and dissipated. At the time, I felt a most peculiar thing: helpless. I realized slowly that I no longer had a place within the Association; I looked upon this slivering rush of entropy with eyes which would never again be dissuaded from the faith that they had gnawn evil. I left the final stages of the experiment for my aide, who was apparently unaffected by the display.

Walking outside of the lab, I looked around at my world. Across the street, absurd little children shot each other by a swing-set. A car whisked past, and an elderly lady in front of the corner market gasped as the bottom of her paper sack burst open, spilling her goods all over the pavement. A glass jar of liquid was broken, and spatters of silvery-beige splayed across the pavement much like the 'ruptor incisor-tendrils had the currents of the globoids inside. I began to giggle, and I shook with tears. Here is what had made me laugh: when the sack broke, I had uttered in my mind an oddly-placed phrase: "The qabalists tell us, 'as above so below.'" With that in mind, I could not tell — I had no way of gnowing — whether I was, in this larger world model, fated to be a globoid or a 'ruptor. I feared the latter, and this made me smile.

Clearly I have no place in the Association any longer, and so do hereby respectfully rescind my membership voluntarily, thus avoiding any messy ostracization-rites.

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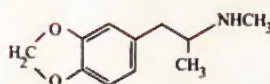
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Contraindications: Concurrent use of stimulants or MAO inhibitors. Heart enlargement, glaucoma, hypertension, aneurysm or stroke history, hepatic or renal disorders, diabetes or hypoglycemia.

WARNINGS

1. Serotonin Depletion: Laboratory research with rats and non-human primates has shown that high doses of MDMA cause long-term reductions in serotonin and serotonin-specific receptor sites, when not co-administered with specific inhibitory chemicals (such as fluoxetine). Patients should limit their maximum dose & frequency, stay hydrated, and talk to their doctor about co-administration of toxicity-blocking agents.

PRECAUTIONS

1. General: MDMA is a strong stimulant and is taxing both physically and mentally. MDMA should be used only by generally healthy individuals. Patients with heart, liver, or kidney dysfunction should not take MDMA.

2. Liver P450 2D6 Metabolism: Less than 10% of the general population have reduced MDMA metabolism efficiency due to below average production of the P450 2D6 enzyme. Patients with a slow metabolism or who currently take other P450-2D6 occupying drugs require much smaller doses and should consult with their physicians before ingestion.

3. Increased Heart Rate and Blood Pressure: MDMA can cause substantial increases in blood pressure and heart rate during the first 5 hours after ingestion. Patients with high blood pressure and/or heart arrhythmias should consult a physician before taking MDMA.

4. Body Temperature: Small to large increases in body temperature are common during the first 5 hours after ingestion. Because most users feel very peaceful during this period they often forget to drink water and remain cool, increasing their risk of hyperthermia.

5. Pediatric Use: Safety and efficacy of MDMA for the treatment of depression, anxiety, or boredom have not been established.

6. Pregnancy & Nursing Mothers: Pregnant and nursing mothers should not ingest MDMA.

7. Overdose: Serious ill effects have been reported from acute ingestion of large doses of MDMA. Overdose may result in blackouts, vomiting, dizziness, headache, increased risk of long-term serotonin depletion, hyperthermia, serotonin syndrome, increased hangover, and other negative effects.

8. Emotional Disorders: Patients with a history of depression, psychosis, anxiety disorder, or other emotional disorders should be carefully observed and the drug discontinued if the disorder recurs to a serious degree.

9. Psychosocial Entanglement: Due to MDMA's ability to break down normal social and cultural barriers frequent users may notice

occasional inappropriate and/or unexpected emotional bond imprinting with other MDMA users in a group setting. Psychosocial entanglements forged in an MDMA session may last for many months after the initial session and could potentially lead to quasi-permanent codependent relationships such as domestic cohabitation and marriage.

Adverse Effects

The following is a representation of patients with adverse events in MDMA (80-125mg) vs. Inactive Placebo dosings.*

Adverse Event	MDMA(%)	Placebo(%)
Abdominal Pain	5	20
Back Pain	13	10
Heart Palpitation	8	27
Tinnitus	85	4
Nystagmus	50	5
Heightened Feelings of Empathy	90	3
Life Changing Spiritual Experience	30	1
Vomiting	15	2
Increased Anxiety	30	10
Increased Perspiration	20	5
Uncontrollable Smiling	75	4
Hangover	40	3
Passing Out	4	0
Dizziness	40	10
Euphoria	90	10
Confusion	30	2
Memory Disruption	26	1

Estimates of Mortality from MDMA use: Less than one death per million uses of MDMA in the US in 1999, based on estimate from the National Household Survey (SAMHSA) and the Monitoring the Future (NIDA) study. Estimating more than 10 million MDMA dose sessions in 1999 with less than 10 MDMA-only deaths. Increase in risk of mortality is likely with age and contemporaneous ingestion of contraindicated medications.

Notes on Dose and Usage in a Clinical Setting

In clinical settings it is common procedure to provide a supplemental dosage of 40-60 milligrams near the one and a half hour point in a session. This supplement typically extends the desired effects for an additional hour with only modest exacerbation of normal side-effects. Additional supplements after the two and a half hour point were rarely found to be clinically productive or emotionally useful.



tablets thought to be 150-mg

Notes on Judgment while on MDMA: It is possible to make bad decisions while on MDMA, particularly with regards to having sex with people who you will later regret having sex with. You may also say things to people you'd later wish to retract, act in an obviously touchy-feely manner, or choose to take your last 6 MDMA tablets over the course of an entire evening. These are all bad choices even though they may seem perfectly normal while on MDMA. Of course bad choices for a given person can be good choices for another person. Suggesting that spontaneity should be suppressed while taking MDMA tends to defeat the purpose of taking MDMA, but there is a line between MDMA-facilitated social experimentation and outright recklessness. It is good to think about your limits before ingestion and to stick to those limits while under the influence.

IMPORTANT WARNING: Despite MDMA's potentially positive clinical effects, possession of this medication without licensing from the US Drug Enforcement Administration can result in severe criminal penalties, including (but not limited to) physical harm incidental to arrest, destruction of personal property incidental to arrest, seizure of all cash or valuable assets in your possession at time of arrest, warrantless seizure of your automobile, home, and computer equipment, court-ordered public humiliation, supervised status, severity of permanent incarceration in prison designated by Amnesty International to be in violation of international human rights treaties, loss of employment.

In MDMA right to life! Ask your doctor or seek further information on your own.

MDMA Resources:
<http://www.mind.org/pubs/psychiatry/9905/0505a.htm>
<http://www.mind.org>



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